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1919/20

COLLEGE BULLETINS

Published by the Agricultural College of Utah, at Logan, Utah.
Issued Bi-Monthly. Vol. 19, No. 1
July, 1919.

Agricultural College of Utah

BULLETIN

General Catalog

1919-1920

THE LIBRARY OF THE
MAY 16 1928
UNIVERSITY OF ILLINOIS

Entered as second class matter September 10, 1918, at the post office at Logan, Utah, under the Act of August 24, 1912. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 22, 1918.

THE UTAH AGRICULTURAL COLLEGE has been designated by the War Department as an approved College for the maintenance of a Reserve Officers' Training Corps. The College becomes, therefore, a training school for officers. In all probability, during the year 1919-1920, there will be in operation at the Institution senior reserve officer training units in Coast Artillery, Motor Transportation, and Infantry. Its graduates as experts in food production and conservation, in general agriculture and home economics, and in such technical work as chemistry, physics, bacteriology, and branches of engineering, have gone into Government service and will be needed in larger numbers in the future, during the post-war period.

MAIN BUILDING, UTAH AGRICULTURAL COLLEGE
Seniors, 1919, Grouped at Main Entrance

THE LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

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Agricultural College of Utah

BULLETIN

GENERAL CATALOG
1919-1920

THE LIBRARY OF THE
MAY 16 1928
UNIVERSITY OF ILLINOIS

Thirtieth Year

With List of Students for 1918-1919

LOGAN, UTAH

Published by the College
July, 1919

CALENDAR FOR 1919

JANUARY

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College Calendar for 1919-20

(Twelve weeks constitute a Quarter; six weeks constitute a Term)

FALL QUARTER

September 15, Monday	Entrance examinations. Registration of former students and of new students admitted on certificates.
September 16, Tuesday	Classes organized.
October 27, Monday	Mid-term work begins.
October 31, Friday	Periwig Club Play.
November 7, Friday	Agricultural Club Ball.
November 27, Thursday	Thanksgiving Day.
December 6, Saturday	Fall quarter ends.

WINTER QUARTER

December 8, Monday	Winter quarter begins.
December 12, Friday	Debate Try-outs.
December 20-28	Christmas Recess
January 1, Thursday	New Year's Day
January 19-24	Farmers' Convention and Housekeepers' Conference at Cedar City.
January 26, Monday	Mid-term begins.
January 26-31	Extension Division Convention at Logan.
January 26-February 7	Scoutmasters' Convention.
January 27, Tuesday	Oratorical Contest, Sons of American Revolution Medal.
February 2-7	Farmers' Convention and Housekeepers' Conference at Logan.
February 2-14	Exhibition of Arts and Crafts by Utah artists.
February 4, 5, 6	College Play.
February 4, Wednesday	Freshman Play.
February 6, Friday	Commercial Club Ball.
February 12, Thursday	Lincoln's birthday.
February 17, Tuesday	Oratorical Contest—Hendrick's Medal.
February 21, Saturday	Military Ball.
February 23, Monday	Washington's birthday.
February 26, Thursday and 27, Friday	College Opera.
March 6, Saturday	Winter quarter ends.

SPRING QUARTER

March 8, Monday	Spring quarter begins.
March 6-14	Fourth Annual Glee Club tour.
March 11, Tuesday	Oratorical Contest—Casto Medal.
March 19, Friday	Junior Promenade.
March 26, Friday	Freshman Play.
April 15, Thursday	Arbor Day.
April 19, Monday	Mid-term begins.
April 19-24	Annual Junior Extension week for High School Agricultural and Home Economics Clubs.
April 23, Friday	"A" Day.
May 4, Tuesday	Senior Chapel.
May 11, Tuesday	Conferring of Scholarships and other honors.
May 15, Saturday	May Festival.
May 29, Saturday	Annual Alumni business meeting and social.
May 29, Saturday	Spring quarter ends.
May 30, Sunday	Baccalaureate Sermon.
May 31, Monday	Commencement and Alumni Ball.

SUMMER QUARTER

June 7, Monday	Summer quarter begins.
June 11, Friday	Reception to Summer School students.
June 26, Saturday	Annual excursion.
July 5, Monday	Independence Day.
July 16, Friday	First-term ends.
July 19, Monday	Second term begins.
July 24, Saturday	Pioneer Day.
August 27, Friday	Summer quarter ends.

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LORENZO N. STOHL .....Salt Lake City, Utah
JOHN DERN .....Salt Lake City, Utah
JOHN C. SHARP .....Salt Lake City, Utah
ANGUS T. WRIGHT .....Ogden, Utah
GEORGE T. ODELL .....Salt Lake City, Utah
LOIS HAYBALL .....Logan, Utah
A. G. BARBER .....Logan, Utah
FRANK B. STEPHENS .....Salt Lake City, Utah
JOHN D. PETERS .....Brigham City, Utah
GEORGE W. SKIDMORE .....Logan, Utah
W. S. HANSEN .....Fielding, Utah
HARDEN BENNION, Secretary of State, ex-officio...Salt Lake City

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JOHN DERN .....Vice-President
JOHN L. COBURN.....Secretary and Treasurer

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Agriculture—A. G. Barber, John C. Sharp, W. S. Hansen.
Mechanic Arts—George Skidmore, Harden Bennion, Angus T. Wright.
Agricultural Engineering—George T. Odell, John D. Peters, Frank B. Stephens.
Home Economics—Lois Hayball, A. G. Barber, Frank B. Stephens.
Commerce—Angus T. Wright, Frank B. Stephens, George W. Skidmore.
Experiment Station—W. S. Hansen, Lois Hayball, George W. Skidmore.
Extension Work—Lois Hayball, Harden Bennion, John D. Peters.
Faculty and Course of Study—Frank B. Stephens, A. G. Barber, John D. Peters.
Live Stock—John C. Sharp, W. S. Hansen, Harden Bennion.
Buildings and Grounds—Angus T. Wright, John Dern, George T. Odell, A. G. Barber, Lois Hayball.
Power, Heat, and Light—John Dern, John C. Sharp, Angus T. Wright, A. G. Barber, Harden Bennion.
Branch of the Agricultural College—John D. Peters, John C. Sharp, W. S. Hansen.
Legislation and Finance—Harden Bennion, Frank B. Stephens, John C. Sharp, George T. Odell, A. G. Barber, John D. Peters.

Officers of Administration and Instruction†

The College Faculty

(Arranged in Groups in the Order of Seniority of Appointment)

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President

GEORGE WASHINGTON THATCHER, B. S.
Professor of Music

WILLIAM PETERSON, B .S.
Professor of Geology
State Geologist

HYRUM JOHN FREDERICK, D. V. M.
Professor of Veterinary Science

FRANK RUSSEL ARNOLD, A. M.
Professor of Modern Languages

JAMES CHRISTIAN HOGENSON, M. S. A.
In Charge Farmers' Institutes and
Agricultural Correspondence-Study, Extension Division

JOHN THOMAS CAINE, B. S.
Auditor

JOHN THOMAS CAINE III, M. S. A.
Director, Extension Division

FRANKLIN LORENZO WEST, Ph. D.
Director, School of General Science
Professor of Phyics

FRANKLIN STEWART HARRIS, Ph. D.
Director, Experiment Station
Professor of Agronomy

†The College Council consists of the President and all members of the faculty with the rank of Professor, Associate Professor, or Assistant Professor.

JOSEPH EAMES GREAVES, M .S., Ph. D.
Professor of Bacteriology and Physiological Chemistry

CALVIN FLETCHER, B. Pd.
Professor of Applied Arts

RAY BENEDICT WEST, C. E.
Director, Schools of Agricultural Engineering and Mechanic Arts
Professor of Agricultural Engineering

ROBERT JAMES EVANS, Ph. D.
Assistant Director and County Agent Leader, Extension

GEORGE RICHARD HILL, Ph. D.
Director, School of Agriculture
Professor of Botany and Plant Pathology

JAMES HENRY LINFORD, D. Did.
Director, Summer School
Superintendent, Correspondence-Study Department

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Acting Director, School of Home Economics
Professor of Mathematics

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Professor of English

WILLIAM ERNEST CARROLL, M. S., Ph. D.
Professor of Animal Husbandry

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Director, School of Commerce and Business Administration
Professor of Economics

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Professor of Accounting
Registrar

FRANKLIN DAVID DAINES, A. M.
Professor of History

JONATHAN SOCKWELL POWELL
Professor of Fine Art

GERTRUDE McCHEYNE, B. S.*
State Leader, Home Demonstration Work, Extension

JOHN L. COBURN, B. S.
Secretary, Treasurer, and Purchasing Agent

---

*On leave of absence.

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Professor of Physiology
Medical Supervisor of Students

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Professor of Zoology and Entomology

MELVIN CLARENCE MERRILL, S. M., A. M., Ph. D.
Professor of Horticulture

JESSE WHITACRE, B. S.
Professor of Foods and Dietetics

JOHANNA MOEN,
Professor of Domestic Arts

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Professor of Military Science and Tactics

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Professor of Farm Management

REUBEN L. HILL, Ph. D.
Professor of Chemistry
In Charge Human Nutrition Investigations, Experiment Station.

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Associate in Human Nutrition Investigations, Experiment Station

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Associate Professor of Wood Work and House Building

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Associate Professor of Forging and Carriage Building

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Agent in Marketing

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CHARLOTTE KYLE, A. M.
Assistant Professor of English

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Instructor in Advertising

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Assistant Professor of Entomology

JOSEPH R. JENSEN, A. B.
Assistant Professor of Physical Education

*On leave of absence.

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Assistant State Leader, Junior Extension Work, Extension

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Assistant Professor of Range Management

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Assistant Professor of Physical Education
In Charge of Competitive Athletics

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Assistant Professor of Military Science and Tactics

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Assistant Professor of Military Science and Tactics

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Superintendent Practice Home

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Instructor in Botany

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YEPPA LUND, B. S.
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Instructor in Commercial Law

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EMIL HANSEN
Assistant in Horticulture
Superintendent of Grounds and Greenhouses

LEON D. HARDY, B. S.
Assistant, Correspondence-Study

MOYER DELWYN THOMAS, B. S.
Assistant in Agronomy

HERMAN WILFORD STUCKI
Assistant in Soil Surveys, Experiment Station

ARTHUR FIFE, B. S.
Assistant in Irrigation and Drainage

DAVID HUGHES
Assistant in Wood Work

ABBY GROESBECK
Assistant Registrar's Office

JAMES McGRATH, Sergeant U .S. A. (Retired)
Assistant in Military Science and Tactics

O. BLANCHE CONDIT PITTMAN, A. B.
Clerk, Experiment Station

IDA R. MITCHELL
Clerk, Extension Division

CHARLES BATT
Superintendent of Water, Heat, Sewerage, and Lighting Plant

RASMUS OLUF LARSON
Superintendent of Buildings

Standing Committees
1919-1920

The President of the College is ex-officio a member of each standing committee.

Practical Courses—Professors Saxer, Wallin, Mr. Sorenson.

Graduation—Professors Saxer, Carroll, Fletcher, Greaves, R. L. Hill.

College Publications—Professors Pedersen, Arnold, Robinson, Ogburn, Huntsman.

Attendance and Scholarship—Professors Ray B. West, Frederick, Porter, Powell, Brossard, R. L. Hill.

Student Affairs—Professors Carroll, Powell, Linford, Porter, Hartle, Thomas, Whitacre, Gardner, Kyle, Romney, Mrs. Merrill.

Publicity—Professors Arnold, Alder, Huntsman, Robinson.

Exhibits—Professors Fletcher, John T. Caine III, Hansen, Moen, Israelsen, Becraft, Alder.

Entrance—Professors Daines, Wallin, Hirst.

Debating—Professors Pedersen, Hendricks, Daines, Porter, Ogburn, Wallin, Miss Smith.

Student Employment—Professors Merrill, Greaves, Powell, Newey, Saxer, George B. Caine, Mr. Brimley.

Student Body Organization—Professors Brossard, Ray B. West, Merrill.

Graduate Employment—Profesors George R. Hill, Jr., F. S. Harris, F. L. West, George B. Caine.

Schedule—Professor Saxer.

Lyceum Course—Professors Hendricks, Thatcher, Arnold, Pedersen, Johnson, Mr. Coburn.

Graduate Work—Professors F. S. Harris, F. L. West, Merrill.

Campus Improvements—Professors Merrill, Ray B. West, Fletcher, George R. Hill, Jr., Mr. Emil Hansen.

Athletic Council—Professors F. L. West (Ch.), Humpherys and George B. Caine (representing the Faculty); Professors Ray B. West, George R. Hill, Jr., and Mr. John H. Bankhead (representing the Alumni); and three representatives of the Student Body.

Editor of Catalog—Professor Robinson.

Finance of Honors and Awards—Professors Hendricks, Linford, Mr. Coburn.

Library—Professors Hendricks, F. S. Harris, Henderson.

Advanced Standing—Professors M. H. Harris, Pedersen, Merrill, Whitacre.

Boy Scout Activity—Professors George R. Hill, Jr., Hogenson, R. O. Porter, Humphreys, M. H. Harris.

Experiment Station Staff

ELMER G. PETERSON, Ph. D.....President
F. S. HARRIS, Ph. D.....Director and Agronomist
WILLIAM PETERSON, B. S.....Geologist
H J. FREDERICK, D. V. M.....Veterinarian
F. L. West, Ph. D.....Physicist
W. E. CARROLL, Ph. D.....Animal Husbandman
J. E. GREAVES, Ph. D.....Bacteriologist and Chemist
BYRON ALDER, B. S.....Poultryman
G. R. HILL, JR., Ph. D.....Botanist
O. W. ISRAELSEN, M. S.....Irrigation and Drainage
W. W. HENDERSON, M. S. A.....Entomologist
M. C. MERRILL, Ph. D.....Horticulturist
R. J. BECRAFT, B. S.....Range Management
GEORGE STEWART, M. S.....Field Crops
D. S. JENNINGS, Ph. D.....Soil Surveys
R. L. HILL, Ph. D.....Human Nutrition
E. B. BROSSARD, Ph. D.....Farm Management
C. T. HIRST, M. S.....Associate Chemist
H. R. HAGAN,* S. M. .....Associate Entomologist
WILLARD GARDNER, Ph. D. .....Associate Physicist
B. L. RICHARDS, Ph. D.....Associate Botanist
BLANCHE COOPER, B. S.....Associate Human Nutrition
D. W. PITTMAN, M. S.....Assistant Agronomist
E. G. CARTER, M. S.....Assistant Chemist and Bacteriologist
TRACY H. ABELL, M. S.....Assistant Horticulturist
YEPPA LUND, B. S.....Assistant Chemist and Bacteriologist
HAROLD GOLDTHORPE, B. S..Assistant Chemist and Bacteriologist
IRVING J. JENSEN, B. S.....Assistant Agronomist
L. F. NUFFER, B. S.....Assistant Botanist
N. E. EDLEFSEN, B. S.....Assistant Physicist
SCOTT EWING .....Assistant Physicist
HERMAN W. STUCKI, B. S.....Assistant in Soil Surveys
ARTHUR FIFE, B. S.....Assistant in Irrigation and Drainage
M. D. THOMAS, B. Sc.....Assistant Agronomist
J. L. COBURN, B. S.....Secretary and Purchasing Agent
O. BLANCHE CONDIT PITTMAN, A. B.....Clerk and Librarian
K. B. SAULS .....Director's Secretary
CARRIE THOMAS .....Mailing Clerk

In Cooperation with U. S. Department of Agriculture

L. M. WINSOR, B. S.....Irrigation
A. F. BRACKEN, B. S.....Dry-Farming

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*On leave of absence.

Extension Division Staff

ADMINISTRATION

Elmer G. Peterson	President of College	Logan
John T. Caine III	Director	Logan
R. J. Evans	Assistant Director and County Agent Leader	Logan

SPECIALISTS

H. J. Frederick	Veterinarian	Logan
J. C. Hogenson	Agronomist	Logan
Ben R. Eldredge	Dairyman	Salt Lake City
R. J. Becraft	Range Management	Logan
Z. B. Wallin	Markets	Logan
Henry Oberhansley	Live Stock	Logan
Rozina Skidmore	Domestic Art	Logan
Sumner G. Margetts	Irrigation and Drainage	Salt Lake City

COUNTY AGENTS

W. W. Owens	Assistant County Agent Leader	Logan
J. P. Welch	Utah County	Provo
R. H. Stewart	Box Elder County	Brigham City
H. A. Christiansen	Beaver County	Beaver
W. P. Thomas	Weber County	Ogden
Alma Esplin	Iron County	Cedar City
J. H. Wittwer	Uintah County	Vernal
R. L. Wrigley	Cache County	Logan
O. P. Madsen	Emery County	Castledale
F. R. Price	Wasatch County	Heber City
Lowry Nelson	San Pete County	Manti
A. E. Smith	Wayne County	Loa
W. J. Thayne	Davis County	Farmington
A. L. Christiansen	Tooele County	Tooele
Hugh Hurst	Kane County	Kanab
C. O. Stott	San Juan County	Monticello
S. R. Boswell	Summit County	Coalville
J. R. Tippetts	Washington County	St. George
D. F. Peterson	Millard County	Delta
G. F. Holmstead	Sevier County	Richfield
A. L. Wilson	Morgan County	Morgan
C. M. Aldous	Piute County	Junction
V. L. Martineau	Salt Lake County	Salt Lake City

HOME DEMONSTRATORS

Gertrude McCheyne*	State Home Demonstration Leader	Logan
Rena B. Maycock	Acting State Home Domonstration Leader	
Hettie White	Millard County	Fillmore
———	Utah County	Provo
Anna Edmunds	Salt Lake County	Salt Lake City
Ellen Agren	Summit County	Coalville
Rose Homer Widtsoe	Salt Lake City	Salt Lake City
Leah P. Jennings	Salt Lake City	Salt Lake City
Minnie J. Smith	Wayne County	Loa
Christine B. Clayton	Iron County	Cedar City
———	Davis County	Farmington
———	Weber County	Ogden

JUNIOR EXTENSION WORK

M. H. Harris	State Leader	Logan
Goldie Faux	Assistant State Leader	Logan
A. I. Tippetts	Weber County	Ogden

CORRESPONDENCE STUDY

J. H. Linford	Superintendent	Logan
J. C. Hogenson	Agriculture	Logan
Leon D. Hardy	Economics-History	Logan

COMMUNITY SERVICE BUREAU

Frank R. Arnold	In Charge	Logan

EXTENSION OFFICE

Ina R. Mitchell	Chief Clerk	Logan
Vera Carlson	Stenographer	Logan
Eva Dunn	Stenographer	Logan

*On leave of absence.

Branch Agricultural College of Utah
at Cedar City

OFFICERS OF ADMINISTRATION AND INSTRUCTION

ELMER GEORGE PETERSON, A. M., Ph. D.
President

ROY FISHER HOMER, B. S.
Principal

PARLEY DALLEY, B. S.
Instructor in Chemistry and Physics

JOHN L. COBURN, B. S.
Financial Secretary

JOHN S. CHRISTENSEN, B. S.
Director of Physical Education
Asistant Instructor in Animal Husbandry

GEORGE H. LUNT, A. B.*
Instructor in History and Economics

GILBERT L. JANSON, M. S.
Instructor in Commercial Subjects

JOHN H. PENDLETON, B. S.
Instructor in Woodwork, Mech. Drawing, Mathematics

LOTTIE H. KUNZ, B. S.
Instructor in English

H. L. FRISBY
Instructor in Piano and Vocal
Director of Chorus

EVA S. THOMAS
Instructor in Domestic Art

H. PEYTON JOHNSON
Instructor in Violin. Director of Band and Orchestra

F. C. BRAITHWAITE, B. S.
Instructor in Art. Registrar

ANNA W. E. PETTIGREW
Librarian

STANLEY IVINS, B. S.
Instructor in Agriculture. Superintendnt of Farms

*On leave of absence.

GEORGE A. CROFT, B. S.
Instructor in Ironwork, Machine, Automobile, and Tractor

JOSEPH GEDDES, M. A.
Instructor in History and Economics

CHRISTINE B. CLAYTON, B. S.
Instructor in Domestic Science. Home Demonstrator for Iron County

EVA BUYS
Instructor in Physical Education for Women
Critic Teacher, Fourth Grade

MATILDA PETERSON
Primary Supervisor in Charge of Training

Instructor in Psychology and Education

THOMAS O. STOKES, B. A.
Principal of Training School

E. B. DALLEY
Critic Teacher, Sixth Grade

FAMIA NELSON
Critic Teacher, Third Grade

EMMA GOWER
Critic Teacher, Second Grade

EMMA SHARP
Critic Teacher, First Grade

Secretary

WILLIAM FLANIGAN
Engineer

CHARLES SLAUGHTER
Superintendent of Buildings and Grounds

In Charge of Dairy

County Chairmen

W. S. Hansen ..... Collinston, Box Elder County
Jos. F. McGregor ..... Beaver, Beaver County
C. R. Marcussen ..... Price, Carbon County
H. H. Blood ..... Kaysville, Davis County
Lars P. Oveson ..... Castledale, Emery County
John N. Henrie ..... Panguitch, Garfield County
_____ ..... Moab, Grand County
Wilford Day ..... Parowan, Iron County
A. H. Belliston ..... Nephi, Juab County
Heber J. Meeks ..... Kanab, Kane County
O. L. Thompson ..... Scipio, Millard County
Daniel Heiner ..... Morgan, Morgan County
Joseph Ipson ..... Junction, Piute County
G. H. Robinson ..... Laketown, Rich County
R. D. Young ..... Richfield, Sevier County
L. R. Anderson ..... Manti, Sanpete County
L. H. Redd ..... Blanding, San Juan County
James L. Kearns ..... Park City, Summit County
C. Alvin Orme ..... Tooele, Tooele County
Don B. Colton ..... Vernal, Uintah County
E. W. Southwick ..... Lehi, Utah County
E. H. Snow ..... St. George, Washington County
John Halls ..... Huntsville, Weber County
Joseph Eckersley ..... Loa, Wayne County
D. A. Broadbent ..... Heber, Wasatch County
R. S. Collett ..... Roosevelt, Duchesne County

AGRICULTURAL COLLEGE OF UTAH

LOCATION

The Agricultural College of Utah is in Logan, the county seat of Cache county, one of the most prosperous agricultural counties in the State. The city has a population, thrifty and progressive, of about 10,700; it is comparatively free from vice, quiet, orderly, clean, and generally attractive, with neat homes, substantial public-buildings, electric lights, a sewer, and a water system. The main streets are paved and cement walks ramify the city; an excellent street-car line extends from the station to the College, and the interurban connects Logan with other towns of the valley as well as with Salt Lake City.

The College, uniquely situated on a broad hill overlooking the city, one mile east of Main street, commands a view of the entire valley and surrounding mountain ranges. The site of the College was formed by the receding waters of prehistoric Lake Bonneville which built an enormous delta at the mouth of Logan canyon upon which the College buildings and farm are located. The beauty and geological significance of the location are perhaps unsurpassed. A few hundred yards to the south is the Logan river. A mile to the east is a magnificent mountain range with a picturesque canyon. In other directions are the towns and farms of Cache County distinctly visible thru the clear atmosphere. The valley is a fertile, slightly uneven plain, 4,600 feet above sea level, about twelve by sixty miles in dimensions, almost entirely under cultivation, and completely surrounded by the Wasatch mountains. It is one of the most attractive and healthful valleys in the West.

POLICY

The Agricultural College of Utah provides, in accordance with the spirit of the law under which it was organized, a liberal, thoro, and practical education. The two extremes in education, empiricism and the purely theoretical, are avoided; for the practical is based upon, and united with, the thoroly scientific. In addition to the practical work of the different courses, students are given thoro training in the sciences, mathematics, history, English, art, modern languages, and other related subjects. The object is to foster all that makes for right living, good citizenship, and high efficiency.

Under this general policy, the special purpose of the Agricultural College of Utah is to be of service in the upbuilding of the State and the great West to which it belongs. The instruction in agriculture and agricultural engineering, therefore, deals with the special problems relating to the conquest of the great areas of unoccupied lands, the proper use of the water supply, and the kinds of crop or live stock which in Utah may be made most profitable; instruction in mechanic arts points out the most promising trades and teaches them so as to meet the needs of the State; instruction in commerce relates to the undeveloped resources and the present commercial conditions of the State, and investigates the principles and methods to be applied in the commercial growth of Utah; instruction in home economics teaches the women right living and economic independence from the point of view of prevailing Utah conditions.

The dominating spirit of the policy of the Agricultural College of Utah is to make the common work of the world—the work that most men and women must do—both profitable and pleasant. The motto of the College is, Labor is Life.

HISTORY

The Agricultural College of Utah was founded March 8th, 1888, when the Legislative Assembly accepted the terms of the national law passed by Congress on July 2nd, 1862. Under this Act of Congress, and the Enabling Act providing for the admission of Utah to the Union, 200,000 acres of land were granted to the State from the sale of which there should be established a perpetual fund, the interest to be used in maintaining the College.

Under the Hatch Act, approved in 1887, the State receives $15,000 annually for the Experiment Station. Under the Adams Act of 1906, the State receives an additional $15,000 annually for research work by the Experiment Station. Under the Morrill Act of 1890, amended by the Nelson Act of 1907, the State receives $50,000 annually for instruction at the Agricultural College. Under the Lever Act, the State received, in 1917-18, about $15,000 which will increase for four years, for agricultural extension work to be done by the Agricultural College.

These federal appropriations, together with the annual income from the land-grant fund, represent the income received from the general government. Since most of these funds must be used in accordance with the law for specific purposes, the institution is dependent on State appropriations for funds with which to provide additional instruction and for general maintenance. These needs have been generously met in the past by the Legislative Assemblies of the State. In 1888 the sum of $25,000 was appropriated for buildings, and the county of Cache and the city of Logan gave one hundred acres of land on which to build the College. Since that time the State has, from time to time, appropriated sufficient funds to erect and maintain all the buildings described in a later section, besides providing largely for instruction, experimentation, and extension work.

By a recent legislative action, the College receives annually 28.34 *per cent.* of 28 *per cent.* of the total tax revenue of the State,

after deducting the revenue from 2.4 mills on the total State valuation (which is not to be exceeded), set aside for the support of the elementary and the high schools. In the same ratio the College will participate in the revenue from the recent occupational tax. The State, moreover, provides $10,000 annually for extension purposes, $15,000 for experimental work, and an increasing fund for farm and home demonstrations.

In September, 1890, the institution was first opened for the admission of students. Degree courses were offered in agriculture, domestic arts, civil engineering, mechanic arts, and commerce; a preparatory course and short courses in agriculture and engineering were also given. Since that time many improvements have been made in the courses; some have been abandoned; various special, practical, year and winter courses in commerce, mechanic arts, and home economics have been added; the standard of the college work has been raised. In 1903, the Board of Trustees established the School of Agriculture, the School of Home Economics, the School of Mechanic Arts, the School of Commerce, and the School of General Science, and in 1911 the School of Agricultural Engineering.

In 1913, the Branch Normal School at Cedar City was made a branch of the Agricultural College and is so maintained.

In December, in 1918, the Board of Trustees authorized the establishment of an Agricultural Engineering Experiment Station to include the departments of irrigation and drainage, roads, farm machinery and transportation, manufacture of agricultural products, rural architecture and buildings, and rural sanitation and public health. The Utah Agricultural College is the first such institution in the United States to establish an agricultural engineering experiment station as a distinct division.

Since 1917, the Institution has consistently aided the Federal Government in war and post-war programs. During 1917-18, the College trained 492 young men in its Reserve Officers' Training Corps. Six hundrerd eighty soldier mechanics were trained at the Institution during the summer of 1918. With

the establishment at the College in the fall of 1918 of a unit of the Students' Army Training Corps, seven hundred twenty-four men were given collegiate and vocational military training. A large percentage of former U. A. C. students who saw service were commissioned.

The College gave valuable instruction in problems of increased production and consumption through its class room work. Twenty-five years of untiring experimentation showed excellent results when applied by Experiment Station specialists to concrete problems of production. The value to the State of the war service of the Extension Division was conservatively estimated at $4,738,027.00.

GOVERNMENT

The government of the College is vested primarily in the Board of Trustees and, under their control, in the four other administrative bodies,—the Directors' Council, the College Council, the College Faculty, and the Staff of the Experiment Station. These, in their several capacities, determine the policy and maintain the efficiency of the institution.

The Board of Trustees consists of thirteen members. Twelve are appointed by the Governor with the approval of the State Senate; the thirteenth is the Secretary of State who is *ex officio* a member. This Board assumes the legal responsibility of the institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations. Vested in it is the power to establish professorships, to employ the instructing force and other officers of the College, and to formulate the general policy of the institution.

Between sessions, the power of the trustees rests with an executive committee, whose actions are referred to the Board for approval. In addition, there are committees, largely advisory, that deal with the general interests of the College.

The Directors' Council consists of the President, the Directors of the various schools,—Agriculture, Home Economics,

Agricultural Engineering, Commerce, Mechanic Arts, General Science, and Summer Quarter—the Director of the Experiment Station, and the Director of the Extension Division. This body has immediate supervision of the instruction and discipline in all the various schools. It constitutes a permanent executive and administrative committee of the College Council and Faculty.

The College Council consists of the President of the College and all members of the faculty holding the rank of professor, associate professor, or assistant professor. All important questions of discipline and policy are decided by this body.

The College Faculty includes the President, the professors, the associate professors, the assistant professors, ranking professors, the instructors, and the assistants. As an administrative body it is concerned with the ordinary questions of methods and discipline and with various other matters pertaining to the general welfare of the College. Through its standing committees it is in intimate contact with the student body and with the life and interests of the college community.

The Standing Committees have delegated to them the immediate direction of all the phases of college life. The conduct of the student in his college home and his regularity in performing college duties; the publications of the College and of the students; the interests of the students on the athletic field, in the amusement halls, and in their various organizations,—all are within the province of appropriate committees.

The Experiment Station Staff consists of the President of the College, the Director of the Station, and the heads, with their assistants, of the departments of the Station. This body is employed in the investigation of problems peculiar to agriculture in this part of the country. It is further responsible for the circulation, through private correspondence and regular bulletins, of such information as is of practical value to the farming communities.

The Students. The College is maintained at public expense for the public good. The students, therefore, are under a peculiar

obligation to perform faithfully all their duties to the State, the Institution, and the community. Most important of these is an active interest in all that concerns the moral and intellectual welfare of the College. Regularity of attendance, faithful attention to studies, and exemplary personal conduct are insisted upon at all times by the administrative bodies of the College.

ADMISSION AND GRADUATION

Admission. Entrance to the freshman class is based upon a certificate of graduation from an accredited high school; or upon the presenting of 15 approved high school units of work; or upon examination, in case of students of special training not obtained in high school.

A high school unit is equivalent to eight preparatory credits that are of one hour in length, or ten that are of forty-five minutes.

A student may be ranked as a conditioned Freshman provided he is deficient in not more than one and one-half units of high school work. This deficiency must be removed, however, before the student is admitted to Junior standing.

Students who enter with more than one and one-half units of high school deficiency must register in the vocational courses (see page 68.)

Advanced Standing. Advanced standing for college work taken after completion of four years of high school may be granted at any time by the Committee on Advanced Standing provided the student presents satisfactory evidence that the work offered is equivalent to the work for which he wishes to substitute it.

Advanced standing or college credit for excess high school units may be allowed at the time the student is given Junior class standing provided:

(a) That the work for which advanced credit is sought be as advanced as the work given in the Freshman year;

(b) That in each subject the work be approved by the department concerned; and

(c) That not more than nine hours of work done in the Junior College of the Utah Agricultural College, and none of the work submitted for advanced credit shall have a grade lower than "B."

The ratio of transfer shall be nine (9) credits for one unit of high school work, unless otherwise recommended by the department concerned.

Twenty-seven (27) credit-hours shall be the maximum acceptable on an excess transfer from high school.

Class Standing. Students are ranked as Freshmen, Sophomores, Juniors, and Seniors at the time they enter, and this rank, when once fixed, is not changed during the school year.

Thirty-six hours (36) of approved college work, in addition to the prescribed entrance requirements, are required for Sophomore rank; eighty-one hours for Junior rank (see pages 33-34.) and one hundred thirty hours for Senior rank. The foregoing requirements are to be exclusive of the required courses in Physical Education and Drill.

Admission to Vocational Courses. Persons 18 years or over, and those under eighteen who have had two years of high school, are admitted without examination to the vocational courses.

To graduate from any of the schools, or to obtain class standing, special students not having the prescribed entrance requirements, must satisfy a committee, by special examination, of their ability to pass the entrance requirements. This committee shall consist of the committee on entrance, the professor of English, and two members of the faculty from the school in which the student wants to do his major work. Application for the examination, which must be taken not later than the beginning of the Junior year, may be made to the register the first of the last week of any quarter.

Registration. The fall quarter opens Monday, September 15; the winter quarter, Monday, December 8; and the spring quarter, Monday, March 8. It is of decided advantage to register upon the opening date.

Students entering more than one week after the opening of the fall quarter must pay an extra fee of $2.50. Students entering for the winter or spring quarter must be fully registered before the opening of the quarter or pay an extra fee of $2.50. The amount of work for which any student will be allowed to register will be reduced by one and one-half credit hours for each week or fraction thereof that the student is late in registration.

Fifteen hours, exclusive of Physical Education and Drill, is the normal registration for any one term. A student may, however, with the consent of the school director, register for seventeen hours.

Quarter Hours. A quarter hour of credit is the credit given for one hour's lecture or three hours of laboratory work each week for twelve weeks. This is the basis upon which credits are now calculated at the College.

Semester Hours. Semester hours of credit have been employed at the College previous to September 1, 1918. A semester hour is the same as a quarter hour, except that the period is eighteen weeks.

Semester hours may be converted intto quarter hours by multiplying by one and one-half.

JUNIOR AND SENIOR COLLEGE COURSES

The collegiate work of the institution is divided into two divisions: Junior College courses and Senior College courses.

Junior College Courses. Any student who has met the entrance requirements imposed upon the Freshman class may pursue any of the Junior College courses provided he has had the necessary prerequisites.

Senior College Courses. Any student wishing to pursue Senior College courses in any subject must first obtain full Junior class standing and have completed the Junior College requirements in that subject, provided that any student having the necessary qualifications may pursue a Senior College course after receiving the permission of the instructor of the course and the director of the school in which he is registered.

Junior Class Standing. To obtain Junior class standing a student must have completely satisfied the entrance requirements. He must have satisfied all of the Junior College requirements in Physical Education and Drill, and, in addition, present eighty-one hours of Junior College work which shall include fifty-four hours of the work in the required groups. (See page 65.)

Graduation. The degree of Bachelor of Science in Agriculture, Home Economics, Agricultural Engineering, Commerce, Mechanic Arts, or General Science, is conferred upon those who present 15 units of high school work and full Junior class standing together with 54 hours of work from the Senior College and sufficient work from either college to make the total number of hours presented equal to 180 exclusive of the required courses in Physical Education and Drill. A student who has been excused from Physical Education or Drill for phyical disability or other valid reason must present an equivalent amount of other work for graduation. The student must meet all of the general requirements of the College (see pages 40-41) and all of the group requirements of the school from which he wishes to graduate. (See page 65.)

Other Requirements for Graduation. The student must have been in attendance at least one school year preceding the conferring of the degree. He must have no grade lower than "D" in any subject used for graduation. Four-fifths of his term grades must be "C" or better. He must be of good moral character. He must have discharged all college fees. He must be recommended for graduation by the faculty of the school in which

he is doing his major work. He must receive the favorable vote of two-thirds of the members of the College Council.

No student may be recommended to the College Council for graduation as long as he has any deficient grades in any subject used toward graduation. Students who expect to graduate at the June commencement must have their work in shape for presentation to the College Council at least 60 days before commencement.

Graduation at the Close of the Summer Quarter. Any student who can satisfy the requirements for graduation by the close of the Summer Quarter may be presented to the College Council in May. Such students are listed with the class of the following year and receive their public graduation at the following Commencement. The graduation of such students, however, will be certified to by the proper authorities of the College as soon as their work is completed, *provided* it is completed before September 15 of the year in which they are passed upon for graduation.

The College Council is the only body that has the authority to waive or abridge in any way the foregoing requirements for graduation.

REQUIREMENTS FOR MASTER'S DEGREE

The degree of Master of Science may be granted on the completion of the following requirements:

The candidate must have been in actual residence at the College at least one (1) year after receiving the Bachelor's degree, and must obtain fifty-one (51) credits for work in addition to the 180 College credits and 15 High School units required for the Bachelor's degree.

To be admitted to the candidacy for the Master's degree the student must have his course of study approved by November 1 by the faculty of the school in which his major subject is taken.

A thesis covering work done in the major department must

be prepared by May 1, and must be accepted by the faculty of the department.

The candidate must successfully pass an oral examination, which will be given by the heads of departments of the School in which the major subject is taken.

ORGANIZATION

The work of the College falls into three distinct divisions: first, the Experimental Division, having for its object the discovery of new truth or the new application of established truth, for the advancement of life; second, the College proper, giving instruction, especially to young people, on the home campus of the College; third, the Extension Division, which carries instruction to the people who can not come to the College campus.

To accomplish this work the following administrative divisions exist, each of which draws upon the departments for its instructional or experimental force:

I. Experimentation.
   1. The Agricultural Experiment Station.
   2. The Agricultural Engineering Experiment Station.

II. Instruction on the College Campus—the College Proper
   3. The School of Agriculture
   4. The School of Home Economics
   5. The School of Agricultural Engineering.
   6. The School of Mechanic Arts.
   7. The School of Commerce and Business Administration.
   8. The School of General Science.
   9. The Summer Quarter.

III. Instruction beyond the College campus.
   10. The Extension Division.

The instructional and investigational force and equipment necessary to carry out the work of the above divisions are organized into departments, of co-ordinate authority, each of which represents a somewhat definite field of knowledge. All officers

of instruction or experimentation belong to one or another of these departments. One professor, designated head, carries the administrative responsibility of the department. At present the College maintains forty-six departments.

THE STUDENT BODY ORGANIZATION

The Student Body Organization embraces all the students of the institution. Its prime object is to foster a proper spirit of college loyalty and to give the students practice in managing public affairs. It also secures dispatch and efficiency, as well as uniformity, in the administration of all matters pertaining to the entire student body and induces all students to participate in college activities. The organization provides each member with a maximum of proper athletic, theatrical, and social recreation at a minimum expense, viz., $5 annually. This society has control, under faculty direction, of the following student activities:

1. *Athletics,* including all inter-class and intercollegiate contests in football, baseball, basketball, and track events. The Agricultural College is a member of the Rocky Mountain Comference, a fact which insures an interesting athletic program.

2. *Musicals,* including all public performances of the Band, the Orchestra, and musical clubs.

3. *Theatricals.* In the past, *A Midsummer Night's Dream, She Stoops to Conquer, Pygmalion, Milestones, The Admirable Crichton,* and various other productions, have been presented.

4. *Debating and Public Speaking.* Triangular debating arrangements have been made whereby, annually, the Agricultural College debates the University of Utah and the Brigham Young University on the same question. Interstate debates are also held. Those who make places on the teams not only win awards but are admitted to membership in the Agora, an honorary debating fraternity. Interest in inter-class debating, for which the Thomas medals are given, is keen.

The annual oratorical contests for the Hendricks medal, for

the Casto medal, for that given by The Sons of the American Revolution, and for the chance to represent the College in the Inter-collegiate Peace contests, maintain among the students an active interest in extemporaneous public speaking. For dates of these contests, see college calendar, page 5.

5. *Student Publications.* The students of the College, under the direction of the faculty of English, publish a weekly school paper, *Student Life.* The junior class publishes the College year book, named *The Buzzer;* the Quill Club, the *Agi-Literose;* the Agricultural Club, *The Link.*

6. *Lyceum Course.* Each year the Student Body presents, in connection with the B. Y. College, from four to six lectures, readers, or musical attractions, of national or local repute. These entertainments are free to members of the Student Body.

STUDENT CLUBS

Not affiliated with the Student Body organization, but standing largely for the interests of the various schools, are the following clubs:

The Agricultural Club, which aims to promote interest in scientific agriculture. The club has effected similar organizations in the high schools of the State. Special lectures, often illustrated, are given at intervals thruout the season.

The Agricultural Engineering Society, which aims to stimulate the interest of students in the more practical side of the work embraced by the engineering courses. Men of repute are invited to discuss questions before the society. It also aims to promote the interest of the students socially.

The Home Economics Club, which is composed of the students in domestic science and arts. The object of the club is to keep students in touch with movements in their field and to promote interest in home economics. Many home economic societies in the high schools of the State are affiliated with this organization.

The Commercial Club, working to promote the interests of the School of Commerce and Business Administration, to popularize the commercial courses, and to consider matters of interest not encountered in routine work. The club maintains an annual lecture course, given by prominent men of the State, on topics of special interest to the business man. All commercial students are eligible to membership.

The Mechanic Arts Association, designed to promote the social and intellectual interest of its members. All the teachers and all the regularly enrolled students of mechanic arts are eligible to membership. Monthly meetings are held thruout the year, at some of which lectures are given by specialists.

Gamma Sigma Delta, a chapter of the national honorary fraternity for students in agriculture. Members are chosen for scholarship from the upper two-fifths of the junior and senior classes in agriculture.

The Agora, a fraternal organization open to men from the intercollegiate debating teams. Its purpose is to foster debating in the College and to keep alive among the old debaters an interest in such contests.

The Chemistry Club, organized to promote interest in chemistry.

The Be-No Club, organized to foster scholarship, fellowship, and loyalty.

The Benedicts' Club, designed to promote the social welfare of married students and to lower their expenses by co-operative buying.

The Periwig Club, composed of students prominent in dramatics. This club produces annually several plays.

The Booklover's Club, organized for the study of subjects related to English literature but not usually treated in the classroom.

The Quill Club, an organization of writers.

The Camera Club, a group of students interested in artistic photography.

The Cosmos Club, organized for the study of world politics.

Le Cercle Francais, maintained by students in French for practice in speaking the language.

Beaux Arts Guild, designed to encourage interest in the various phases of Art by lectures and informal social meetings.

Alpha Sigma Nu, a senior honorary society. Membership is maintained by elections from the Junior class held each spring.

Various other clubs, as well as a number of fraternities and sororities, are also in successful operation.

STUDENT EXPENSES.

Tuition is free. Utah students pay an annual entrance fee of $5.00; students from other states pay $25.00. A uniform laboratory and library fee of $5.00, a gymnasium fee of $2.00, and a withdrawal deposit of $1.00, are charged every student.

Every regular student must pay a Student Body fee of $5.00, for which a membership card is issued admitting him to all the activities controlled by the Student Body organizations: athletic events—football, basketball, baseball, and track—dramatic and musical entertainments, socials, lectures, etc. This system has been found to be a great saving to the students and a most excellent means of fostering proper interest in student activities.

The Utah Agricultural College has been designated by law as an Institution where units of the Reserve Officers' Training Corps are maintained. As such it has promised the Government to give certain military instruction of a definite kind and character.

Every physically fit male student who registers at the College becomes automatically a member of the Reserve Officers' Training Corps and subscribes to the military requirements of the institution.

In order to remain and receive instruction at the College or

to graduate finally from the College, the student must be in attendance at all military classes and do satisfactory work in them.

The student, by registration at the Institution, obligates himself to conform to such requirements as are or may be prescribed by the College Council under the regulations of the Reserve Officers' Training Corps. These requirements, at present, are as follows: Two years of required military training, followed by two years of optional military training. Free uniforms are furnished by the War Department to those taking the required work. Those taking the last two years receive, in addition to free uniforms, commutation of subsistence. The requirements will vary slightly according to the military units to be established. During the year 1919-20, the units to be maintained at the College will, in all probability, include Coast Artillery, Motor Transportation, and Infantry.

All women students who are physically fit must take Physical Education during the first two years of their college work at the Institution, or until they have satisfactorily completed Physical Educaotion 11 and 12 or their equivalents. All vocational women students must register in Physical Education 10.

All students taking Physical Education must provide themselves with a gymnasium suit and gymnasium shoes. Cost, about $6.00.

All students in Foods and Dietetics must provide themselves with two white wash dresses and two white aprons.

All graduates from the School of Home Economics must spend a period of six weeks in residence at the Practice Home. The expenses are $5.00 per week for board and room.

The fee charged for a diploma of graduation is $5.00.

Good board and room in a private home costs from $6 to $7 a week. By renting rooms and boarding themselves, students are able to reduce considerably the cost of room and board.

The College maintains a modern, well equipped cafeteria where, at cost, students may get two well cooked meals daily.

The cost of necessary books and stationary ranges from $15 to $30 a year.

Students are held responsible for any injury done by them to the College property.

The following table furnishes an estimate of the actual yearly expenses of students attending the Utah Agricultural College:

	Lowest	Average	Liberal
Tution, books, fees, etc	$ 40	$ 40	$ 40
Room and board	175	200	230
Incidentals or miscellaneous	25	70	135
Total	$240	$310	$405

The Senior Loan Fund, maintained by the Student Body, has helped many students.

SCHOLARSHIP AND AWARDS

The Johansen Scholarship Fund of $5,000, a gift of the late Mrs. Johanna Johansen, provides three scholarships annually, each worth approximately $120, for the help of worthy students of Junior or Senior rank.

The One Thousand Dollar Liberty Bond Endowment yields a loan fund of $40, which is to be loaned by the Directors' Council to a student who has made formal application before April 2, and who has need of financial help, and who has demonstrated a high degree of scholarship in the work of previous terms.

The U. A. C. Faculty Women's League endows the Institution with a fund of $50, to be given annually as a scholarship to a worthy and deserving student of the School of Home Economics.

The Lois Hayball Medal is to be awarded annually to a Junior or Senior student in the School of Home Economics on the following basis:

(a) Qualities of womanhood.

(b) Evidence of application of Home Economic principles in every relation of daily life.

(c) Proficiency in scholastic attainments.

The Thomas Medal, a gift of Professor George Thomas, is given each year to winners of the inter-class debating series.

The Hendricks Medal, a gift of Professor George B. Hendricks, is awarded yearly to the student who delivers the best extemporaneous speech.

The Casto Medal, a gift of Professor George D. Casto, is presented annually for the best memorized speech.

The Sons of the American Revolution award a medal annually for the best patriotic speech.

Scholarship A's are given at the close of each year to the six highest ranking students.

A list of the recipients of various honors will be found at the back of the catalog.

Several further awards are given for athletic and other student-body activities.

BUILDINGS AND EQUIPMENT

The College now has nearly thirty buildings, all modern, well lighted and heated, and all carefully planned.

The Main Building is 360 feet long, 200 feet deep in the central part, and four stories high. It contains the large auditorium, seating about 1,500, the administrative offices, the library, and many class rooms and laboratories.

The Women's Building is one of the largest and best equipped structures devoted entirely to domestic science and arts in the inter-mountain region.

The Thomas Smart Gymnasium is one of the finest and most complete college gymnasiums in the Rocky Mountain region. It contains a main exercise hall, 114 by 70 feet, the equipment of which can be quickly put in place or hoisted out of

the way, to suit any need. Ten feet above the main floor is a running-track, a hand-ball court, and a wrestling and boxing room. The large pool, shower and steam baths, and dressing rooms with steel lockers, are ideal.

The Experiment Station is a two-story brick structure 45 feet long and 35 feet wide, containing the offices of the station staff, a reading room, and a dark room for photography.

The Mechanic Arts Building, a two-story brick structure, has a floor area of 40,000 square feet, and contains the wood-working department, machine shops, forging rooms, foundry, carriage building rooms, mechanic arts museum, drafting rooms, blue-printing room, room for painting and staining, and class rooms,—all well equipped.

The Three-Story Chemistry Building, thoroly modern in plan and equipment, is occupied by the Departments of Chemistry, Physics, and Bacteriology.

The New Live-Stock Building of three stories is exceptionally well fitted with facilities for the study of dairying, hog, horse, and sheep husbandry, and range management.

The Agricultral Engineering Building, an excellently arranged three story brick structure, will be ready for occupancy the fall of 1919. It will house the Departments of Irrigation and Drainage, Surveying, Hydraulics, Mechanical Drawing, Architecture, Household Sanitation, Farm Mechanics, including auto and tractor work, and some related phases of the work of the Institution.

The Plant Industry Building will be in part, at least, ready for use this fall. It is a four story brick building, thoroly modern in arrangement. It will house the departments of Agronomy, Botany and Plant Pathology, and Horticulture.

The Barns contain the various breeds of cattle, horses, sheep and hogs most common in the western section.

The New Horse Barn, which will be ready for occupancy by fall, will be the most modern structure of its kind that can be built.

THE STOCK JUDGING PAVILION makes it possible to do judging in all kinds of weather.

THE POULTRY YARDS are equipped with various types of buildings to accommodate about one thousand fowls; a brooder house with a capacity of 2500 chicks; and a modern incubator cellar with standard incubators of several makes and designs. The laboratory is well supplied with different styles and sizes of incubators, brooders, feed hoppers, etc., suited to use in study of the management of large and small flocks.

THE GREENHOUSES are prepared for laboratory instruction in the propagation of horticultural plants, and in the practice of floriculture and vegetable gardening.

THE VETERINARY HOSPITAL contains a well-equipped dispensary, operating room, and stalls for patients.

THE VEGETATION HOUSE will also be ready this fall. It will form the first unit of a new and extensive greenhouse system.

THE SEED HOUSE, designed as a store house for the seeds of the Department of Agronomy is being built this summer.

THE HEATING PLANT, in order to take care of the many new buildings on the College Campus, has been doubled in size and will insure properly heated laboratories and class rooms.

EQUIPMENT

The Bacteriological Laboratory is well equipped with modern apparatus. To encourage careful work, the students are provided with individual lockers.

The Chemical Laboratories are modern and thoroly equipped.

The Physical Laboratory Equipment is complete, consisting of all the necessary apparatus for class demonstration. Gas, compressed air, continuous and alternating current electrical power, etc., are available.

The Physiological Laboratory is supplied with an excellent collection of native animals, skeletons, both articulated and dis-

articulated, many enlarged models of organs, a *papier mache* manikin, and complete slides of all the tissues.

The Zoological and Entomological Laboratory is equipped with water and gas, improved instruments, embryological models, skeletons from the vertebrate groups, collections of mounted birds, mammals, reptiles, fishes, and insects.

The Botanical and Plant Pathological Laboratory is well equipped for general work as well as for research. The department maintains a good working library in connection with the laboratory.

The Department of Agronomy is provided with a large collection of agricultural plants, seeds, and soils, representing the main crops and types of soil of the inter-mountain region.

The College farms are equipped with the best and latest implements and machinery for carrying on work scientifically. They are divided, for illustrative and experimental purposes, into numerous plats on which many varieties of farm crops are grown, and upon which important experiments are carried on.

The soil physics laboratory has a good supply of apparatus for accurate and up-to-date work.

The farm crops laboratory, equipped with gas, has a large supply of farm crops on hand and is well supplied with apparatus.

The Commercial Rooms, occupying the entire third floor of the front of the Main building, are specially designed and furnished for business. The room for typewriting contains a full complement of standard machines.

The College Museum contains many specimens illustrative of geology, mineralogy, paleontology, and vertebrate and invertebrate zoology, including a large series of the insects of the inter-mountain region; also an extensive series of plants of the western highlands. An extensive collection of grains represents the produce of Utah and other states. Contributions of fossils, ores, animals, plants, relics, or other material of value to the museum, are appreciated. All gifts are labeled and preserved and the name of the donor is recorded.

The Art Rooms, composed of six studios, are supplied with plain and adjustable tables, easels and model stands, individual lockers, cases for materials, casts from the old masters in sculpture, reproductions of great paintings, still-life models and draperies, as well as with a valuable collection of ceramics, textiles, and books on art.

The rooms are further supplied with a kiln for china firing, and equipment for work in ceramics, pottery, art leather, art metal, and jewely.

The Library occupies the entire front of the second floor of the Main building, and contains about 30,700 bound volumes and a large number of pamphlets. The books are classified by the Dewey decimal system, and there is a complete dictionary card catalog. The shelf list, also on cards, forms a classified catalog for official use.

The Library, a depository for United States public documents, receives practically all material printed by the government. The files of the United States Department of Agriculture and the publications of the State Experiment Stations are nearly complete; the bulletins are bound, and made easy of access by the printed card catalogs. There are one hundred and twenty-five periodicals on the subscription list, besides about eighty which are received as exchanges for the publications of the College and of the Experiment Station. Thirty-five newspapers of the State are regularly received and placed on file in the reading room.

The land occupied by the College embraces about 142 acres. Of this, thirty-five acres constitute the campus, laid out with flower-beds, broad stretches of lawn, tennis courts, wide drives, and walks.

Immediately east of the Main building are the parade grounds and the old athletic field. of about ten acres. The Adams athletics field is one-fourth mile west of the campus. The farms comprise 97 acres; the orchards and the small fruit and vegetable gardens, 10 acres.

In order to enlarge the experimental and instructional oppor-

tunities of the faculty and students of the college, the State Legislature in 1919 authorized the expenditure of $25,000 to purchase additional farm land.

Other farms are maintained, under the direction of the Experiment Station, in various parts of the State.

The equipment of the Branch Agricultural College is described in the circular of that institution.

THE EXPERIMENT STATION

The Agricultral Experiment Station is a division of the College, supported by Federal and State appropriations, supplemented by the receipts from the sales of farm products. The Station was created for the purpose of discovering new truths that may be applied in agriculture, and for making new applications of well-established laws. Essentially devoted to research, it does the most advanced work of the College.

The Station is not, in the ordinary sense, an institution where model farming is carried on. It has a much higher purpose. The practices of the farmer are subjected to scientific tests, in order to determine why one is bad and another good. Acting on the suggestions thus obtained, the scientists begin new investigations, in the hope that truths of great value to the farmer may be discovered.

The Station confines its efforts as far as possible to the particular problems of the inter-mountain region. Irrigation, the foundation of western agriculture, has received greatest attention. Elaborate experimental plats have been equipped, where the value of different quantities and methods of application of water have been studied and the underlying principles brought out.

Dry-farming problems are only second in importance to those of irrigation in the development of the West. A number of experimental dry-farms are maintained on which every effort is made to increase production. Many of the present investigations involve the water-holding capacity of soils, the water re-

quirements of crops, the movement of plant foods, and other questions fundamental to all systems of agriculture.

Other problems vitally affecting the argicultural West are under investigation. Breeding experiments for the improvement of sugar beets, dry land grains, alfalfa, and poultry are in progress. Studies of insect pests and plant diseases affecting western crops and orchards have received consideration. The problem of producing fruit free from worms has been practically solved. The control of the alfalfa weevil is one of the present problems. The development of better cropping methods, care and feeding of livestock, the development of the dairy industry, and the general betterment of western agricultural conditions are among the problems the Station is attempting to solve.

State appropriations are granted under provision that the arid experiment farms be maintained and that work in irrigation and drainage, and the study of the alfalfa weevil, be continued. Publications of the Station are also provided for. Bulletins containing the results of experimental work, circulars containing timely and practical information on various subjects, an annual report,—these constitute the publications of the Station. The bulletins and circulars are published at irregular intervals.

The Experiment Station has a high educational value. Nearly all the staff are also members of the College faculty; the students, therefore, receive at first hand an account of the methods and results of the work of the Station, as well as training in their application. The opportunities that the Station offers for advanced work in several branches of science are of great importance. The scientific method and spirit characterize all its operations, and none can fail to be benefited by a study of the experiments that go-on at all times of the year.

The Station is always glad to assist the advanced students in any investigation they wish to undertake.

THE AGRICULTURAL ENGINEERING EXPERIMENT STATION

The Board of Trustees established in 1918 an Agricultural Engineering Experiment Station as a separate division of the work of the College. The organization of the agricultural engineering experiment station is a logical development of the work of the College following the organization in 1911 of the School of Agricultural Engineering. It will enable the college to use part of its funds, both federal and state, in the investigation of the many problems which confront the development of agriculture on the engineering side.

The profession of rural engineering is almost a realization. The farmer must, therefore, be advised fully in regard to engineering as it affects rural communities. That there was a direct need for this organization, is evidenced by the fact that much work which is properly a part of the work of such a station has been carried on informally by various departments of the college. The work of the Agricultural Engineering Experiment Station will continue in a more complete way the work which has thus already been undertaken informally and it will branch out ultimately to include all of those problems wherein the profession of engineering touches that of agriculture.

As organized at present, the Agricultural Engineering Experiment Station consists of the Departments of Irrigation and Drainage, Roads, Farm Machinery and Transportation, Manufacture of Agricultural Products, Rural Architecture and Buildings, and Rural Sanitation and Public Health. Complete programs for work have already been outlined in these different departments and comprehensive investigations will begin immediately.

In the Department of Irrigation and Drainage the plan is to study in detail irrigation institutions best suited for Utah; to determine what irrigation practices result in maximum crop pro-

duction; to investigate water measurement devices and engineering structures used in the transmission of water from intake to farm; to study special types of distribution systems with an idea of determining which are at once the most efficient and most economical; to study the management and operation of irrigation systems; to determine what trench machines work best under western conditions, and to make a complete investigation of well-drilling machinery, methods of well-boring, ways of locating the under-ground water supply, and the determination of the best fuels to use in pumping.

The Department of Roads will pay particular attention to the development of a type of road which will at once stand the wear of heavy farm traffic and yet be easy to construct and utilize local materials in its makeup. In these investigations various gravels and sands to be found in different sections of Utah will be studied in order to determine their value as road materials. The importance of such a type of road cannot be overestimated because it will tend to a rapid improvement of rural roads thruout the state. The construction of bridges will also be studied.

The rapid development of the farm tractor and the great increase in the use of farm machinery in general have made it necessary that there be available complete information concerning the best types of farm machinery for western conditions. The Department of Farm Machinery and Transportation has outlined very liberal projects for investigation. Briefly stated, they are as follows: The practicability of tractors in intermountain farming, including the effects of high altitudes and steep slopes on the power of the tractor, the effect on cultivation and yield of the soil-packing tendency of the tractor, and the effect of dust on the life of the engine; the economic value of the motor truck in hauling farm products; the future of gas power on the farm used for either pumping plants or for electric lighting plants; the improvement of beet cultivating and beet harvesting machinery; the efficiency of the small combined harvester for dry farming; a com-

parison of kerosene and gasoline as fuels for farm tractors, and a study of proper lubricants for the gas motor.

The manufacture of agricultural products has been little studied in Utah and the field for investigation here offered to the new experiment station is very broad. The proposed investigations cover the manufacture and preserving of food products; the care and utilization of clothing; the production of raw materials on the farm; the manufacture of foodstuffs, including the processes of milling, canning, pickling and evaporating; the manufacture of textiles; and the utilization of by-products from manufacturing establishments.

The Department of Rural Architecture and Buildings will study the entire architectural problem as applied to the rural community. This will include, not only the proper planning of farm homes, barns, and other structures, but the ventilating, heating, and lighting problems to be met with away from the urban centers. A careful study will be made of proper building materials and of farm equipment.

The Department of Rural Sanitation and Public Health will deal with the problems of the health of the rural community. These will include a study of the sanitation of milk and water supplies; the sanitation of food; the sanitation of the home, including sanitary problems as they apply to location, heating, lighting, ventilation and sewage disposal of the farm home; the prevention of diseases; and studies in nutrition and child welfare.

THE EXTENSION DIVISION

Organized for the purpose of disseminating all the work of the College among the people of the State, as far as practicable, and for the further purpose of beginning new work outside the College, which may be of service to the people of the State, the Division serves two purposes: it carries on organized instruction in the various subjects included in the College curriculum, and it performs personal and community service of a more di-

rectly practical nature. The Extension Division is the joint representative in Utah of the United States Department of Agriculture and the Utah Agricultural College.

ADMINISTRATIVE DEPARTMENTS

The Extension Division, in its administration, is divided into departments, as follows:

I. Farm Management Extension
   1. Farmers' Institutes and Schools
   2. Farm Demonstrations (County Agent work)
   3. Farm Management Demonstrations
   4. Specialists.

II. Home Management Extension
   5. Housekeepers' Institutes and Schools
   6. Home Demonstrations

III. Junior Extension
   7. Boys' and Girls' Clubs
   8. High School Clubs

IV. Correspondence Studies

V. Miscellaneous
   9. Trains, Fairs, and Exhibits
   10. Community Service Bureau
   11. Publications

The departments of Farmers' and Housekeepers' Institutes and Schools conduct meetings among the farmers and housewives of the State. These meetings may be single, called institutes; or they may be organized courses of study in one or many subjects, called schools. In the schools, the field of instruction is broad, based largely upon existing courses of instruction in the College. At present the following courses of instruction are emphasized because of their immediate relation to the needs of the State: agronomy, agricultural economics, agricultural engineering, animal husbandry and dairying, entomology, home economics, horticulture, irrigation, poultry husbandry, and veterinary science.

As the work develops the field of instruction may be enlarged to include all the courses given in the institution which are adaptable to extension instruction.

Farm and Home Demonstration includes the work of the county demonstrators, also called agents, and that of the extension specialists. These travel from farm to farm and from home to home teaching such facts, principles, and practices of modern agriculture and home science as seem needed in the development of the districts assigned. The demonstrator co-operating with local rural organizations known as farm bureaus, the experts at the College, and those of the United States Department of Agriculture, is a member of the extension faculty in agriculture and home ceconomics.

The work in Farm Management Demonstrations emphasizes the business side of farming. Farmers are taught how to analyze their business, how to keep proper accounts, and how to summarize their work at the end of the year to determine profit or loss.

Boys' and Girls' Clubs and High School Clubs, conducted co-operatively with the United States Department of Agriculture, interest boys and girls in agriculture, home economics, and other industrial subjects, and serve the parents of the State in supplying work of great intellectual and practical value for their sons and daughters. This department is affiliated with public schools, church organizations, and existing organizations of boys and girls. Contests are conducted in the growing of potatoes, sugar beets, mangel wurzels, cabbages, onions, peas, tomatoes, cucumbers, celery, poultry, corn and pigs and in the making of bread, in canning, sewing, in the arts and crafts, etc. The competition is arranged first among members of the same club; then among the champions of the clubs in the county; and finally, among the champions of all the counties. A State champion boy and girl are thus selected each year. To promote the work, various prizes are offered.

Associations of women, affiliated with the farm bureaus, work

thru the women's organizations of the State—civic, religious, or literary—and organize groups of girls and women for study of home economics. Monthly study outlines, or home economic leaflets, are issued by the Extension Division for the use of the home economics associations. Other women's organizations in the State are helped in their educational and home work, by special lectures, supplying reading matter, suggestions for organization, and study outlines.

The Correspondence-Study Department. One of the recent developments of college organization is the establishing of correspondence-study departments, in order to extend its activities to the fireside.

Correspondence-study furnishes an excellent opportunity for systematic instruction to the student preparing for high school or college, the teacher, the professional or business man, club woman, —to all who cannot leave home.

Admission to Correspondence Work. Students must be eighteen years of age or graduates of the public school.

Scope. Courses offered:

1. Academic studies which, under certain restrictions, count towards a degree.
2. Practical studies designed to advance men and women in a given occupation.
3. Reading Courses for the farmer: short, practical, non-credit courses in agronomy, animal husbandry, horticulture, farm machinery, bee-keeping, etc.
4. Reading Courses for the housewife: short, practical, non-credit courses in sanitation, home management, cooking service, sewing, home decoration, home care of the sick, etc.
5. A preparatory or high school course.
6. Preparatory or grade studies.

Special bulletins of the correspondence-study department will be mailed to any one interested.

The purpose of the Department of Trains, Fairs, and Exhibits is to conduct trains in co-operation with the railroads; to en-

courage county and other fairs by supplying organization and exhibition outlines, lectures, premium lists, and judges of exhibits. On various other occasions the Extension Division supplies material for exhibition.

The work of the Community Service Bureau, designed to help Utah towns and villages in community celebrations, club work, and school life, includes (a) play service, (b) club service, (c) community service, (d) debate service, and (e) library service.

Publications of real value to the rural communities are issued in the form of circulars, as occasions demand.

COLLEGE PROPER

ORGANIZATION.

For the purpose of efficient administration, the instruction on the campus or in the College proper is divided into seven schools: (1) The School of Agriculture; (2) The School of Home Economics; (3) The School of Agricultural Engineering; (4) The School of Commerce; (5) The School of Mechanic Arts; (6) The School of General Science; (7) The Summer Quarter.

The School of Agriculture offers a four-year college course with opportunity to major in agronomy, horticulture, animal husbandry and dairying, agricultural chemistry, bacteriology, plant pathology, veterinary science, or economic entomology.

The School of Home Economics offers a four-year college course with opportunity to major in foods and dietetics, household administraiton, institutional management, or textiles and clothing.

The School of Agricultural Engineering offers a four-year college course with the opportunity to major in irrigation and drainage, farm mechanics, agricultural surveying, roads, rural architecture, rural sanitation, and agricultural technology.

The School of Commerce and Business Administration offers

a four-year college course with the opportunity to major in accounting, economics, political science, sociology, finance and banking, or history.

The School of Mechanic Arts offers, in addition to shorter trade courses, a four-year college course in mechanic arts, with the opportunity to major in woodwork, iron work, or machine work.

The School of General Science offers a four-year college course in general science.

The Summer Quarter offers instruction during twelve weeks of the summer, after the regular term has closed, in most of the subjects taught during the winter.

Each school also offers *Practical Year and Winter Courses* which may be taken by mature students fitted to follow them.

For *Normal Training*, see index.

THE SCHOOL OF AGRICULTURE

Agriculture is one of the most promising of modern professions. It is growing very rapidly, and, owing to the scientific foundation that recent years have given it, large numbers of intelligent people are adopting it as their means of livelihood. The new agriculture is not a profession of unceasing toil. On the contrary, the freedom, health, intellectual activity, and profit to be obtained from intelligent farming are attracting the best classes of people. Utah and other western states are offering excellent opportunities to those who prepare themselves for scientific farming. There is a great demand for men who can supervise large farm enterprises; there is a greater demand for men who can act as experts, experimenters, or teachers in the schools and other institutions in the State and National Government. The supply of such men does not equal the demand.

Experience having shown that practically all of the students who take agriculture come from the farms, it is assumed that they are acquainted with the various manual operations of farm

work. The design of the school is, therefore, to teach the sciences that underlie practical agriculture, and to offer sufficient supplementary studies to develop the agricultural student to the intellectual level of the educated in the other professions. The agricultural courses are planned to lay a foundation upon which the student can build a successful career as a farmer or develop into a specialist in agriculture.

The general and departmental libraries enable the student to become acquainted with a wide range of agricultural and related literature; the laboratories of the College and the Experiment Station afford opportunity for training and experience not obtainable from books alone.

For subjects in which the student may major or minor see Required Work for Graduation.

THE SCHOOL OF HOME ECONOMICS

The steady growth of Home Economics courses in leading colleges and universities indicates the ever increasing realization that the well conducted home is the most important factor in the development of healthful and capable citizenship. But the multiplying complexities of modern life demand further that those in charge of the family understand much that is beyond the exact limits of the home. Hence the stress laid on the study of childhood and adolescence, the causes underlying the high cost of living, and the problems of social, industrial, and civic life.

The State of Utah wisely introduced courses in home management when the College was first organized, and the support which has been accorded to the work by the public shows the wisdom which prompted this provision.

Year by year increased facilities have become available for the students in the School of Home Economics, and the most recent addition to its efficiency, the College Practice Home, testifies to the sustained faith of the Board of Trustees in this department of College activity. Groups of six senior students reside in

the Practice Home for successive periods of six weeks each, sharing the work of the household under the supervision of a woman who is professionally trained and who has had many years of experience in her own home. Here the young women have the opportunity to test out the practical work of their foregoing College courses.

The technical work in this school is organized into three departments, each dealing with one of the three equally important and interrelated phases of Home Economics. These are the Departments of Food and Dietetics, Household Administration, and Textiles and Clothing. The course as a whole includes certain foundational courses in science and art that are prerequisite to the technical work, and the so-called cultural courses, which must be included both to make a true Home Economics Course and to meet the College graduation requirements. This combination is well designed to fit women for the following professions: (1) Home Keeping, (2) Teaching of Home Economics, (3) Home Economics Extension Work. It also prepares women to hold various positions in the social and industrial organizations, for instance, as sanitary inspectors, dietitians, health visitors, and designers and household decorators.

The completion of the Home Economics course requires four years of College work, and leads to the degree of Bachelor of Science.

The vocational courses in Home Economics are offered to women who are unable to take the regular course and yet desire limited training in this work.

THE SCHOOL OF AGRICULTURAL ENGINEERING

The rural problem has many phases. An adequate and self-perpetuating country life cannot be made simply by teaching people how to raise grain and fruit, and how to manage and improve livestock. The country might be filled with farmers well trained

in these branches and still lack many of the elements necessary for a well-balanced and efficient rural community. Many problems having to do with the entire community rather than with the individual farmer must be solved by men with training for that kind of work rather than by those trained to produce crops and live-stock on a single farm. Again, many questions on the individual farm have to do with construction rather than with production from the soil. These questions can be properly answered only by men with special training.

In the past, agricultural colleges have given their attention to the direct questions of farming, but now the entire rural problem must be met. The farm must be a desirable and healthful place to live. The buildings must be so arranged and constructed as to give the maximum of efficiency and comfort and at the same time have proper sanitary provision. The rural roads must be such that the farmer can move his crops with small expense, and go to town with comfort and speed. The machinery of the farm must be so constructed and cared for that it will be reliable and work economically. The limited supply of irrigation water must be so used as to produce maximum returns. There must be factories to change the raw materials of the farm into high-priced finished products. All these necessities demand men trained for them.

To meet the demand, the College has organized a School of Agricultural Engineering designed to enable men to solve all but the most technical engineering problems of an entire rural community. The courses are very helpful to the farmer who does not wish to do the work of a trained engineer.

Students may major in irrigation and drainage, farm mechanics, agricultural surveying, farm and public roads, rural architecture, rural sanitation and public health, agricultural technology, and art. These courses all lead to the degree of Bachelor of Science.

THE SCHOOL OF COMMERCE AND BUSINESS ADMINISTRATION

The purpose of the School of Commerce and Business Administration is to give opportunity for a liberal education with special emphasis upon the commercial and industrial phases of life. Persons who complete the commercial courses are prepared to assume leadership and responsibility in business and in various industries and professions. In order to meet the growing demands and to keep pace with recent tendencies in business education, students may major in economics, political science, sociology, accounting, finance and banking, history, and marketing.

In addition to these college courses, vocational courses are offered.

For the professions of law and medicine, the commercial courses afford excellent preparation. Graduates are prepared for positions as teachers in commercial schools. The demand for qualified teachers is greater than the supply, and many desirable positions as industrial managers are open to those who are qualified.

The European War has created an intense demand for men trained in foreign service and foreign trade. The Federal Bureau of Education has requested all colleges of the country to offer courses in preparation for such service. Accordingly, the School of Commerce and Business Administration has outlined a four years' course designed to fit students for foreign trade and diplomatic service. Especial emphasis will be placed on our South American commerce.

THE SCHOOL OF MECHANIC ARTS

This school offers three-year trade courses in contracting and building, forging and carriage work, and automobile repairing; a two-year trade course in painting and interior decoration;

and a four-year college course leading to the degree of Bachelor of Science. These afford opportunities for persons endowed with mechanical ability to develop their powers and to enjoy working where nature intended. The life of the trained mechanic is as free as any and his efforts bring good wages.

The information offered finds application in every industrial activity and is much demanded by the rapid growth in the mechanical and industrial pursuits. As more and more of the work of man is done by machinery and labor-saving devices, it is desirable to obtain informaiton that will enable man to meet the new conditions intelligently. The many applications of electricity and gas power in the factory, shop, home, and on the farm, and the advent of the automobile demand a knowledge of materials, tools, machines, and processes.

The agricultural student can obtain in the School of Mechanic Arts just the information he needs to enable him to do the constructive work in farm buildings and the repair work necessary in operating machinery, thereby making farm life more profitable and desirable. Those who intend to enter engineering will find no better preparation than that offered in the mechanic arts courses. In the shops a knowledge of the nature of materials, methods of construction, and operation of machinery, can be had better than elsewhere. The demand for manual training teachers is far in advance of the supply.

The drafting rooms give thoro work in the methods of making mechanical drawings, and afford opportunity to specialize in the line of work the student is pursuing, such as architectural, carriage, machine, and agricultural drawing.

Students may major in wood work, iron work, machine and automobile work, mechanical drawing, technology of mechanic arts, and art. Vocational courses are also offered.

All products of the shop are the property of the school, students being allowed to take away specimens of their work only by permission.

THE SCHOOL OF GENERAL SCIENCE

To carry out the work of the several technical schools of the College, an efficient instructing force and a complete modern equipment have been provided in the natural and physical sciences, as well as in English, mathematics, history, language, etc. This makes it possible to satisfy the growing demand for strong baccalaureate courses affording a broad general education in the earlier years, and admitting of specialization later. Such courses constitute the work of the School of General Science, and, paralleling the other degree courses of the College, lead to the degree of Bachelor of Science.

Upon completion of four years' work in general science, students receive the degree of Bachelor of Science in General Science.

For subjcts in which students may major or minor, see Requirements for Graduation.

SUMMER QUARTER

The College maintains, as an integral part of its work, a summer session, beginning early in June, and continuing for twelve weeks, divided into two terms of six weeks each. Every department of the College is represented, the courses of instruction being arranged to meet the particular needs of summer students. For the benefit of teachers, special courses in education are provided in addition to the regular work of the College. Students desiring to make up conditions or prepare for advanced work are given all assistance possible. The entire equipment of the institution is available for the summer session, and every care is taken to preserve the standard and the spirit of the College. No admission requirements are prescribed, but students in all departments are directed by instructors to those courses in which they may pursue work to the best advantage. Arrangements have been made with

the State Board of Education to accept summer quarter credits in individual subjects in lieu of examination. An entrance fee of $6 is charged. Board and rooms can be secured throughout the city at the usual prices. The special summer quarter circular will be sent on request.

Normal Training. For the purpose of providing specially trained teachers of domestic science and arts, agriculture, and mechanic arts, arrangements have been made whereby the graduates of the Normal School of the State University may enter the degree courses of the Agriculture College and there obtain technical work in home economics, agriculture, and mechanic arts. All the work done in the State Normal School is credited the candidates for the professional degree.

Graduates from the degree courses in home economics, agriculture, mechanic arts, commerce and general science, of the Agricultural College, are given the normal certificate upon the completion of one year of professional work at the State Normal School.

SCHEDULE OF WORK REQUIRED FOR GRADUATION

A student must present 15 units of high-school work for entrance and complete 180 term hours of college work before receiving his diploma.

Group Requirements. The 180 hours of college work required for graduation must be distributed according to the following plan:

Twenty-four hours, forming a major, must be in one department. A minor of 18 hours must be chosen in the same School. This is the so-called technical work. Besides this, 96 hours of general work must be chosen from certain specified groups. The remaining 42 hours are elective. These requirements are shown in tabular form as follows:

SUMMARY OF REQUIREMENTS FOR GRADUATION

(In Quarter Credit Hours)

Technical Division

Major Subject	24 hours
Minor Subjects (must be in same school as the major subject)	18 "

General Division

Biological Science Group	18 "
Exact Science Group	18 "
Language Group	24 "
Social Science Group	18 "
Special Groups (additional work in one or more of the above groups to be chosen by the School Director)	18 "
Electives	42 "
Total	180 hours

The departments from which major and minor subjects may be elected are grouped as follows:

REQUIRED WORK

Technical Division

Major, 24 hours in one department.

Minors, 18 hours in some other department or departments of the same school.

SCHOOL OF AGRICULTURE

Agronomy	Chemistry
Animal Husbandry	Dairying
Art (minor only)	Entomology
Bacteriology	Horticulture
Botany and Plant Pathology	Veterinary Science

SCHOOL OF AGRICULTURE ENGINEERING

Art
Agricultural Surveying
Agricultural Technology
Farm Mechanics
Irrigation and Drainage
Roads
Rural Architecture
Rural Sanitation

SCHOOL OF COMMERCE AND BUSINESS ADMINISTRATION

Accounting and Business Practice
Art (minor only)
Economics
History
Finance and Banking
Political Science
Sociology
Stenography (minor only)
Typewriting (minor only)
Marketing

SCHOOL OF HOME ECONOMICS

Art (minor only)
Textiles and Clothing
Foods and Dietetics
Household Administration
Music (minor only)

SCHOOL OF MECHANIC ARTS

Art
Iron Work
Mechanical Drawing
Machine and Automobile Work
Wood Work
Technology of Mechanic Arts

SCHOOL OF GENERAL SCIENCE

Art
Bacteriology
Botany
Chemistry
English
Entomology
Foreign Languages
Geology
Library Work (minor only)
Mathematics
Music
Physics
Physiology
Zoology

The departments from which the general subjects may be elected are grouped as follows:

REQUIRED WORK

General Division

BIOLOGICAL SCIENCE GROUP (18 hours)

Bacteriology
Botany
Entomology
Physiology
Veterinary Science
Zoology

EXACT SCIENCE GROUP (18 hours)

Accounting
Chemistry
Geology
Mathematics
Physics
Surveying

LANGUAGE GROUP (24 hours)

English
French
German
Latin
Spanish

SOCIAL SCIENCE GROUP (18 hours)

Economics
History
Finance and Banking
Political Science
Sociology

SPECIAL GROUPS (18 hours)

ELECTIVES (42 hours)

VOCATIONAL COURSE.

Vocational courses in agriculture, home economics, mechanic arts, and commerce and business administration have been added to the regular work of the school. In these, emphasis is given subject matter which can be put to immediate and practical application on the farm, in the shop, in business, or in the home.

No scholastic prerequisites are required for entering the vocational courses except that the student must have completed two years of high school work, or be over eighteen years of age.

Various vocational courses offered by the different schools of the College follow. For full description of them see departments concerned. All courses lettered "a," "b," "c," etc., are strictly vocational. Some of the elementary courses of college grade may be entered by vocational students, however, after consultation with the head of the departmentt. For full description of them see departments concerned. A tabulated list of vocational courses offered in the different quarters follows:

AGRICULTURE

Fall Term	*Winter Term*	*Spring Term*
Fruit Growing	Agronomy	Principles of Gardening
	Dry Farming	
	Stock Feeding and Management	
	Rural Sanitation	
	Botany	
	Farm Management	
	Practical Horticulture	
	Range Management	
	Veterinary Science	

HOME ECONOMICS

Food for the Family	Food for the Family	Food for the Family
Dressmaking	Hand Sewing	Dressmaking
Household Textiles	Dressmaking	Household Textiles
	Household Textiles	

AGRICULTURAL ENGINEERING AND MECHANIC ARTS

Forge Practice

Rural Sanitation
Automobiles and tractors
Advanced auto repair
Automobile Electrical Repair
Short Tractor course
Irrigation and Drainage
Forge Practice

Automobiles and Tractors
Advanced Auto Repair
Automobile Electrical Repair
Forge Practice

COMMERCE AND BUSINESS ADMINISTRATION

Bookkeeping
Calculator Operation
Adding Machine Operation
Business Organization
Elementary Business Finance
Industrialand Commercial Law
Stenography
Typewriting

Bookkeeping
Calculator Operation
AddingMachine Operation
Economics of Business
Industrial and Commercial Law
Stenography
Typewriting

Bookkeeping
Calculator Operation
Adding Machine Operation
Civics
Stenography
Typewriting

GENERAL SCIENCE

Elementary English
Review of Grammar
Plane Geometry

Rural Sanitation
Elementary English
Physiography
History of Civilization
Plane Geometry
Arithmetic

Elementary English
Review of Grammar
History of Civilization

Following are outlines of vocational courses arranged in sequences, upon the completion of which students will be granted a certificate signed by the Director of the School to indicate the time spent and the degree of proficiency attained.

SUGGESTED COURSE FOR STENOGRAPHERS AND TYPEWRITERS

First Year

Accounting a.—E. Bookkeeping.
Accounting b.—Int. Bookkeeping
English b.—El. Business English.
Stenography a.—Beginning course in Stenography.
Typewriting a.—First course in Typewriting.
Mathematics c.—Arithmetic.
History a.—Ancient and Medieval Civilization.
History b and c.—Modern Civilization.

Second Year

Accounting c.—Advanced Bookkeeping.
English 7.—Business English.
Stenography b.—Second course in Stenography.
Typewriting b.—Advanced course in Typewriting.
Mathematics 2.—El. Analysis.
Political Science a.— El. Commercial and Business Law.
Economics a.—Economics of Business.
Economics b.—El. Business Organization.
Economics c.—El. Business Finance.
Political Science b.—Civics.

COURSES UNDER THE SMITH-HUGHES ACT. IN AGRICULTURE

Suggested Course in Agriculture for Students Preparing for Teachers in Agriculture under the Smith-Hughes Act.

Freshman Year:	I	II	III
Chemistry	5	5	5
Botany	5	5	5
English	2	2	2
Agronomy(Crops)	4	4	
Horticulture	..		4
	16	16	16

Sophomore Year	I	II	III
Physics	3	3	3
Elocution	3	3	
Zoology	5		
Anatomy		5	
Physiology			5
Psychology			5
Veterinary Science	4		
Animal Husbandry		5	3
	15	16	16

Junior Year:	I	II	III
Geology	5	5	
Agronomy (Soils)	4		
Irrigation	5		
Economics 2		3	3
Science of Ed.			5
English		5	
Farm Mech.	5		
Bacteriology			5
Secondary Ed.			5
Elective		3	
	19	16	18

Senior Year:	I	II	III
Plant or Animal Breeding		5	
Dairying		4	
Methods of Teaching Agriculture		3	
Rural Education		3	
Teacher Training			5
Farm Buildings	3		
Surveying			3
Critic Work			3
Sociology	3	3	
Farm Management	5		
Feeds and Feeding	5		
Horticulture			5
	16	18	16

IN HOME ECONOMICS

Suggestive grouping of subject matter for four year course of training for teachers of Home Economics under the Smith-Hughes Act.

Students who desire to be recommended as teachers in Home Economics under the Smith-Hughes Act must complete substantially the following courses. The remainder of the work is elective.

Freshman Year

Textiles I (Elementary Dressmaking, review of technic.)
Art 1-21-2 (Design, color, composition.)
Zoology I and Botany I (Elementary Zoology and Botany.)
Or Physics I and Botany I (Elementary Physics and Botany.)
Chemistry I (Inorganic Chemistry.)
English 7 (Freshman composition and rhetoric.)
Household Administration 2 (Home nursing.)
Physical Education 11 (3 hours per week.)

Sophomore Year

Foods II (Preparation and preservation of foods).
Physiology I and II (Human Physiology).
Textiles 2a and 2b (Study of textiles and textile fabrics).
Bacteriology II (General Bacteriology).
Chemistry 18 (Organic Chemistry).
Economics I (General economics).
Education I (Education Psychology).
Physical Education 12 (Three hours per week).

Junior Year

Household Administration 22a (Home furnishing and decoration).
Bacteriology 8 (Sanitation and Public Health).
English or Language (3 hours thruout the year).
Science of Education.
Secondary Education.
Textiles 5 (Costume history, designing, and modeling).
Textiles 6 (Advanced dressmaking).

Senior Year

Chemistry 7 (Physiological Chemistry).
Foods 4 (Dietetics and Nutrition).
Sociology I and II (Principles of Sociology, Applied Sociology).
Education 7 (Methods of teaching Home Economics).
Education 8 (Practice teaching).
Household Administration 23 (Practice Home).
Household Administration 21 (Household Management).
Household Administration 25 (Mothercraft and Child Welfare).

Prospective students are urged to include in their high school courses such elementary sciences as Chemistry, Physics, Botany, and Zoology and thereby increase the amount of election which they may enjoy during their college course.

TRADE COURSES

Three year courses, to prepare students for a trade, are given in the following lines of work: wood work, forging, machine and automobile work, and in interior decoration. Two year courses are given in the following lines of work: show card and sign writing, art metalry, china painting, and fabric decoration.

Students wishing to prepare for a trade in any of the above lines should make arrangements with the heads of departments concerned. Upon completion of the work outlined and upon the approval of the College Council, they will receive a letter of recommendation stating their proficiency in the work.

RELATION BETWEEN U. OF U. AND U. A. C.

The University of Utah and the Agricultural College of Utah are the two institutions maintained by the State for the higher education of its citizens. They have been assigned separate and sharply defined parts of the field of human knowledge. The laws defining these divisions are printed below.

In spite of the existing laws, much misunderstanding exists as to the work that may be done by either of the institutions. To set doubts at rest, the agreement printed below, which is merely an interpretation of the law, has been ratified by the Board of Regents of the University of Utah and by the Board of Trustees of the Utah Agricultural College.

To the Agricultural College, alone, has been assigned the collegiate work in all branches of agriculture, irrigation, agricultural engineering, home economics, including domestic science and art, commerce, and mechanic arts. To do properly the work thus assigned, first class departments must be maintained in practically all of the arts and sciences. All the work of the Agricultural Colege is, however, done with a view to its application in the fields belonging to the College. Moreover, the College is the conservator, as far as an educational institution may be such, of

the industrial development of the State, excluding pure engineering and normal work, which are specifically assigned to the University of Utah.

STATE LAWS RELATING TO THE WORK OF THE TWO INSTITUTIONS

2292. Courses of Study in the University. The University, until otherwise provided for by law, shall be the highest branch of the system of public education. As far as practicable its courses and methods shall be arranged to supplement the instruction of the subordinate branches of such system, with a view to afford a thoro education to students of both sexes in the arts, the sciences; literature, and the civil professions, including engineering; but the University must not include in its courses agriculture, except elementary agriculture as is or may be prescribed in the normal course, horticulture, animal industry, veterinary science, domestic science and art, except as is or may be prescribed in the normal course, and instruction in irrigation as applied to the measurement, distribution, and application of water for agricultural purposes. Approved March 9, 1911.

2087. Courses of Study in the Agricultural College. The courses of instruction in the Agricultural College, until otherwise provided by law, shall comprise agriculture, horticulture, forestry, animal industry, veterinary science, domestic science and art, elementary commerce, elementary surveying, instruction in irrigation as applied to the measurement, distribution, and application of water for agricultural purposes, for which a degree in engineering in agriculture may be given, military science and tactics, history, language, and the various branches of mathematics, physical and natural science, and mechanic arts, with special reference to the liberal and practical education of the industrial classes. But the Agricultural College shall not give courses in liberal arts, pedagogy, the profession of law or medicine, or engineering, except agricultural engineering. Approved March 9, 1911.

UNIVERSITY OF UTAH-AGRICULTURAL COLLEGE AGREEMENT

Proposition 1

The School of Education of the University of Utah shall give all the courses necessary to prepare teachers and supervisors in the elementary schools in all subjects taught in these schools; but the University shall not offer the technical work in agriculture and domestic science and domestic art, needed to prepare special teachers of these subjects in secondary schools. The University shall not offer advanced courses in agriculture, domestic science, and domestic arts; it may offer elementary courses in these subjects—high school courses—and educational courses, i. e., the methods of teaching these subjects.

It is understood that in these subjects courses suitable for third and fourth year high school students are also suitable for freshmen and sophomores in the college who have not had these courses. Such courses may be taught in the School of Education of the University, and students of college grade may receive college credit upon completion of these courses.

The Agricultural College shall not offer courses in education, but shall advise all students preparing to teach to come to the State School of Education to receive instruction and training in professional education subjects. The School of Education shall advise all students wishing to become special teachers of agriculture, domestic science, or domestic arts in high schools to go to the State Agricultural College for their technical work of college grade in these subjects.

Note.—A new agreement, based upon the above but providing for the giving of extension work at either institution by the other where such procedure is necessary, is now under consideration by the two institutions.

Departments of Instruction.

1. Accounting and Business Practice
2. Agricultural Education
3. Agricultural Engineering
   a. Agricultural Surveying
   b. Roads
   c. Rural Architecture
   d. Rural Sanitation
4. Agronomy
5. Animal Husbandry
6. Art
7. Bacteriology and Physiological Chemistry
8. Botany
9. Chemistry
10. Correspondence Studies
11. Dairying
12. Economics
13. English
14. Entomology
15. Farm Management
16. Farm Management, Extension
17. Farm Mechanics and Automobiles
18. Finance and Banking
19. Foods and Dietetics
20. Geology
21. History
22. Home Management, Extension
23. Horticulture
24. Household Administration
25. Irrigation and Drainage
26. Junior Extension
27. Library Economy
28. Marketing
29. Mathematics
30. Mechanic Arts
    a. Forging and General Blacksmithing
    b. Machine and Automobile Work
    c. Mechanical Drawing
    d. Technology of Mechanic Arts
    e. Woodwork and House-building
31. Methods in Experimentation and Extension
32. Military Science and Tactics
33. Modern Languages and Latin
34. Music
35. Physical Education
    a. For Men
    b. For Women
36. Physics
37. Physiology and Physiological Chemistry
38. Political Science
39. Public Speaking
40. Range Management
41. Rural Sanitation and Public Health
42. Sociology
43. Stenography and Typewriting
44. Textiles and Clothing
45. Veterinary Science
46. Zoology and Entomology

RECITATION TABLE

The recitation hours are sixty minutes in duration and begin at 8:00 a. m. The following shows the entire schedule:

1 hour, 8:00— 9:00
2 hour, 9:00—10:00
3 hour, 10:00—11:00
4 hour, 11:00—12:00
5 hour, 12:00— 1:00
6 hour, 1:00— 2:00
7 hour, 2:00— 3:00
8 hour, 3:00— 4:00
9 hour, 4:00 —5:00

From 11:30 a. m. to 2 p. m. the cafeteria, or college restaurant, is open. An evening meal will also be served in the cafeteria.

On Tuesdays, the fourth period (from 11:00 to 12:00) is devoted to chapel exercises; on Thursdays, to Student Body meetings.

Courses of Instruction

ACCOUNTING AND BUSINESS PRACTICE

Professor P. E. Peterson
Miss Farrell
Mr. Lindsay

VOCATIONAL COURSES

The aim of these courses is to develop the students within a short time to assume positions as bookkeepers and office employees. Thoro drill in principles, and abundant practice in the making of entries in modern books of account and in the preparation of statements are given.

Accounting, practice periods extend thru the. seventh eighth, and ninth hours daily. All accounting practice work should be done during these hours.

a. Elementary Bookkeeping. Thoro drill in the principles of double entry and in the preparation of financial statements. Two lectures and six hours' practice per week. Fall quarter. Four credits.

Lec. M. W. 2:00. *Mr. Lindsay*

b. Intermediate Bookkeeping. A continuation of course a. Bookkeeping for a wholesale business. Emphasis is laid on labor saving devices and analysis of statements. Two lectures and six hours' practice per week. Winter and Spring quarters. Four credits each quarter.

Lec. M. W. 2:00. *Mr. Lindsay*

c. Advanced Bookkeeping. Methods in such special business as banking, commission, real estate, railway stations,

etc. The actual business practice in school offices during the Spring quarter. Six hours' practice work. Fall, Winter, and Spring quarters. Four credits each quarter.

Lec. M. W. 3:00. *Mr. Lindsay*

JUNIOR COLLEGE COURSES

One of the results of recent commercial development has been the growth in importance of accounts to business men. A knowledge of accountancy is indispensible. Business efficiency and scientific management demand that accountants be more than mere bookkeepers. Men claiming professional standing in the accounting profession must be men of broad, fundamental training in the arts and sciences as well as in the technic of their profession.

1a. Bookkeeping Technic. A great number of students who enter the college have had no previous training in bookkeeping. In order that students shall be prepared to take up the work in principles of accounting it is necessary that they first receive a thoro grounding in the technic of bookkeeping. Two lectures and six hours' practice work per week. Fall quarter. Four credits.

Lec. T. Th. 10:00. *Professor Peterson*

1b. Farm Bookkeeping. Principles of bookkeeping with special application to the farm. Two lectures and six hours' practice work per week. Winter quarter. Four credits.

Lec. T. Th. 9:00. *Professor Peterson*

1c. Bookkeeping for Cooperative Institutions. Principles of bookkeeping with special application to the needs of students in marketing—work includes a discussion of the leading types of associations such as cooperative creameries, grain elevators, and live stock and fruit shipping associations. Two

lectures and six hours' practice work per week. Spring quarter. Four credits.

Lec. T. Th. 9:00. *Professor Peterson*

2. Principles of Accounting. The fundamental principles that the accountant must use, that the manager must know in order to profit from the accounting staff, and that every investor must understand to interpret correctly financial reports. Prerequisite, course 1a or its equivalent. Two lectures and six hours' practice work per week. Winter and Spring quarters. Four credits each quarter.

Lec. T. Th. 10:00. *Professor Peterson*

3. Systems of Accounts. A study of the leading accounting systems. During the Fall quarter the time will be devoted to building and loan, life and fire insurance, banking, trust companies; during the Winter and Spring quarters to department stores, electric lighting companies, street railways, steam railways, municipal, and executor's accounts. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 12:00. *Professor Peterson*

SENIOR COLLEGE COURSES

4a. Cost Theory. The Fall quarter a study will be made of the underlying principles of costs which may be applied in practice in accordance with the needs of any situation. As practice work a complete cost set will be worked out. Three credits.

(Not given in 1919-20).

4b. Cost Practice. Typical cost systems with abundant practice in the formulation of systems and in the working out of special methods suitable to different lines of industry. Three credits.

(Not given in 1919-20).

5. Advanced Accounting. This is a course in advanced

theory open to students who have completed course 2. It is primarily a study of corporation accounting, emphasis being laid upon problems of valuations of balance sheets, depreciation, principal and interest calculations, consolidation and mergers, consolidated balance sheet, and treatment of intercompany profits. Fall and Winter quarters. Three credits each quarter.

M. W. F. 11:00. *Professor Peterson*

6. Auditing. Auditing and investigations. In addition to theoretical study, students audit the accounts of the school offices.

(Not given in 1919-20).

7. Household Accounts. (Household Administration 27). The practical application of accounting principles to home problems. Two lectures and six hours' practice work per week. Winter quarter. Four credits.

Lec. T. Th. 12:00. *Professor Peterson*

8. Farm Accounting. Application of the principles of cost accounting to the needs of the farming business. Six hours' practice work. Spring quarter. Four credits.

Lec. M. W. F. 11:00. *Professor Peterson*

OFFICE MANAGEMENT

Professor P. E. Peterson
Miss Farrell

VOCATIONAL COURSES

a. Calculator Operation. Method of operating calculators. Accuracy and speed secured. Five practice hours per week. Any quarters. Any days. One credit.

Miss Farrel

b. Adding Machine Operation. Study of the use and correct operation of the adding machine. Accuracy and speed secured. Five practice hours per week. Any quarter. Any days. One credit.

Miss Farrell

c. Office Management. Study of the organization and layout of an office; selection, training, and securing of efficiency from office employees; office records and filing; etc. Three lectures.

(Not given in 1919-20).

Professor Peterson

AGRICULTURAL EDUCATION

JUNIOR COLLEGE COURSE

1. Vocational Psychology.* Five lectures. Spring quarter. Five credits.

Daily, except Saturday, 10:00.

Assistant Professor Beeley

SENIOR COLLEGE COURSE

2. Science of Education.* Five lectures. Spring quarter. Five credits.

Daily, except Monday, 8:00. *Assistant Professor Beeley*

3. Rural Education.* Five lectures. Winter quarter. Five credits.

Daily, except Saturday, 9:00. *Professor Steiner*

4. Secondary Education.* Three lectures. Spring quarter. Three credits.

M. W. F. 11:00 *Assistant Professor Beeley*

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*Given at the Utah Agricultural College by the University of Utah.

5. Methods of Teaching Agriculture.* Five lectures. Winter quarter. Five credits.

Daily, except Saturday, 8:00. *Professor Steiner*

6. Teacher Training in Agriculture.* The student will teach a class in high school agriculture under supervision during the quarter. Spring quarter. Credits to be arranged.

Professor Steiner

7. Methods of Teaching Home Economics.* Five lectures. Fall quarter. Five credits.

Daily, except Saturday, 12:00.

Professor ————

8. Teacher Training in Home Economics.* Supervised training in the teaching of high school home economics. Winter quarter. Credits to be arranged.

Professor ————

9. Ethics. A general survey of the field of ethics, including the criterion of the moral, the beginning and growth of morality, theory of the moral life, social organization and the individual, ethics of the economic life, and the family. Five lectures. Spring quarter. Five credits.

Daily, except Saturday, 1:00. *Professor Fletcher*

10. Project Management. Education for today must be practical. To bring this education to the masses of the people, the Smith-Lever and Smith-Hughes laws have been passed by our National Congress. Both of these laws require a certain amount of systematized, practical work. This definitely outlined piece of work is called a project. Many leaders and supervisors are needed to look after the boys and girls who are doing this agricultural project work. The purpose of this course is to train leaders and supervisors for this work and to give them actual

*Given at the Utah Agricultural College by the University of Utah.

experience in the writing of and the working out of projects, keeping records, making out reports, etc.

Two recitations and one laboratory period each week. Winter and Spring quarters. Three credits each quarter.

Hours to be arranged. *Professor Hogenson*

11. SCOUTMASTERSHIP. A course in the organization, management, and leadership of the Boy Scout Troop. First Aid, Signaling, Handicraft, Camping, Athletics and Games; Stories, Trees, Birds, Rocks, Stars, etc.; the problems and aims of the Boy Scout movement. One lecture and one laboratory period. Hikes will be arranged. Spring quarter. Two credits.

Lec. S. 8:00; lab. M. 2:00 to 5:00.

Committee in charge:

Professor George R. Hill, Jr.
Professor Hogenson
Professor R. O. Porter
Associate Professor Humphreys.
Associate Professor M. H. Harris

AGRICULTURAL ENGINEERING

AGRICULTURAL SURVEYING

PROFESSOR RAY B. WEST

JUNIOR COLLEGE COURSES

1a. FARM SURVEYING. For students of agriculture. Practice in the handling of surveying instruments that may be purchased by the average farmer. Running of ditch lines, grading and leveling of land, retracing of section lines, and the laying out of tile drains. One recitation and two laboratory periods. Spring quarter. Three credits.

Lec. W. 12:00; lab. T. Th. 2:00 to 5:00 *Professor West*

1. Surveying for Agricultural Engineering Students. This is a more thoro course than course 1a, and covers in addition to the above a study of the instruments generally used by engineers ,topographic surveying, hydrographic surveying, and some mine and city surveying. Prerequisite, Trigonometry. One recitation and two laboratory periods. Fall and Spring quarters. Three credits each quarter.

Lec. M. 12:00; lab. M. W. 2:00 to 5:00 *Professor West*

3. Soil And Other Agricultural Surveys. The methods of preparing maps of a given agricultural area, and surveys of the various agricultural interests within the area. Three recitation periods. Any quarter. Three credits.

Professor West

4. Mapping. Practice in the mapping of the various kinds of surveys that may be encountered by the agricultural engineer. Three laboratory periods a week. Three credits. Winter quarter.

Lab. M. W. F. 2:00 to 5:00 *Professor West*

SENIOR COLLEGE COURSES

2. Canal and Road Surveying. Instruction and practice in the application of the surveying methods used in the laying out and construction of canals and roads. Prerequisite, Surveying 1. Three recitations and two laboratory periods. Fall quarter. Five credits. Open to Junior College students.

Lec. T. Th. S. 8:00; lab. T. Th. 2:00 to 5:00

Professor West

ROADS

Professor Ray B. West

1. Road Construction. Road location, grade, drainage, resistance to traction, road materials, cost of construction and of

machinery for preparing road material. Five recitation periods. Fall quarter. Five credits.

Daily, except Monday, 9:00. *Professor West*

2. Road Maintenance. Width of tires and size of wheels, keeping up the road, repairing worn surfaces, maintaining drainage, employment of labor, cost of maintenance, comparison of different road machines. Prerequisite, Roads 1. Five recitation periods. Winter quarter. Five credits.

Daily, except Monday, 9:00. *Professor West*

3. Bridge Building. Methods of bridge construction, materials used and the amount of stress on arches of various kinds; the relative cost, strength, and durability of different bridges. Special attention is given to small bridges and culverts. Three recitation periods. Any quarter. Three credits.

Professor West

4. Road Materials. A study of the various materials used in the construction and maintenance of roads. Special attention is given to the materials available to Utah farmers. Prerequisites, Geology 2 and 4. Two recitation and one laboratory periods. Spring quarter. Three credits.

Lec. T. Th. 9:00; lab. F. 2:00 to 5:00. *Professor West*

RURAL ARCHITECTURE

Professor Ray B. West
Professor Fletcher

JUNIOR COLLEGE COURSES

1. Farm Structures. The arrangement, design, and construction of barns, stables, poultry houses, silos, and other farm structures. Three recitation periods. Fall and Winter quarters. Three credits per quarter.

Lec. M. W. F. 11:00, Fall quarter; Lec. M. W. F. 12:00, Winter quarter *Professor West*

3. Materials of Construction. (Technology of Mechanic Arts 7). The chemistry of iron, steel, the alloys, etc., and their special use in machine parts; strength, composition, and proper use of the woods, plaster, glass, glue, paints, cement, brick, etc., in building. Five recitation periods. Fall quarter. Five credits.

Daily, except Monday, 10:00 *Professor West*

5. Concrete Construction for Agricultural Purposes. Various mixtures of cement and their uses; the use of concrete in the making of barns, water troughs, posts, etc. Three recitation periods. Spring quarter. Three credits. Hours to be arranged. *Professor West*

8. Planning of Farm Structures and Homes. The making of plans for farm buildings, including complete specifications, cost of materials, and erection. Hours to be arranged. *Professor West*

9. House Building and Contracting. (Technology of Mechanic Arts 5). Various methods of construction; the frame, two brick, three brick, stucco, shingle, cement block, and stuccooed hollow tile; cost and economy of each; interior finishing. Five recitation periods. Hours to be arranged. *Professor West*

SENIOR COLLEGE COURSES

4. Mechanics of Framed Structures. The strength and the design of joints in timber framing. Holding power of nails, screws, drift bolts, etc. Design of beams, columns, and simple trusses in wood. Prerequisite, Trigonometry, and plain Physics. Five recitation periods. Winter quarter. Five credits.

Daily, except Monday, 10:00. *Professor West*

6. Reinforced Concrete. The design of beams, columns, and floor slabs in reinforced concrete, and the application of the principles of design to retaining walls, cisterns, etc. Three credits.

Hours to be arranged. *Professor West*

10a. Rural Architecture. Architectural composition. Study of the principles of compostion as applied to buildings, emphasis being put on correction of common errors in the design of elevations. For related work see Art 24 and Horticulture 8. Open to Junior College students. Ten studio hours. Fall quarter. Three credits.

Hours to be arranged. *Professor Fletcher*

10b. Architectural Composition. Continuation of course 10a with special attention to the relation of all the parts of the exterior and architectural effects in environment. For related work see Art 24 and Horticulture 8. Prerequisite, Course 10a. Open to Junior College students. Ten studio hours. Winter quarter. Three credits.

Hours to be arranged. *Professor Fletcher*

11. Styles in Architecture. Study of the great styles or periods of architecture with special attention to those phases most vital to an understanding of modern building. Open to Junior College students. Ten studio hours. Spring quarter. Three credits.

Hours to be arranged. *Professor Fletcher*

RURAL SANITATION

Professor Greaves
Professor Ray B. West
Professor Henderson
Mr. Carter
Mr. Sorenson

JUNIOR COLLEGE COURSES

1. Rural Sanitation (Bacteriology a). An elementary course dealing with bacteria in relation to agriculture. The nature, cause, and prevention of communicable diseases, the

sanitary necessities of the community and the individual are considered. Three lectures. Winter quarter. Will be given in 1919-20 if registration justifies.

M. W. F. 8:00. *Mr. Carter*

2. Parasitology (Zoology 5). The classification, morphology, and life history of animal parasites. The disease producing protozoans, flukes, tapeworms, and round worms receive special study. Arthropods as external parasites and carriers of pathogenic organisms receive attention. Three lectures. One laboratory period. Fall quarter. Four credits.

Lec. M. W. F. 8:00; lab. Th. 2:00 to 5:00 *Mr. Sorenson*

SENIOR COLLEGE COURSES

3. Sanitation (Bacteriology 8). Principles of sanitation; nature of disease, its spread, and means of prevention and disinfection; sanitary arranging and construction of farm buildigs. Prerequisite, Bacteriology 1 or 2. Three lectures, Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 11:00. *Professor Greaves*

4. Sanitary Analysis (Bacteriology 6). Methods used by the sanitary inspector in examining water, milk, and other foods. Prerequisites, Chemistry 6 and Bacteriology 1 or 2. Breakage deposit of $2.50. Time and credit to be arranged.

Professor Greaves

5. Dairy Bacteriology (Lecture). (Bacteriology 5a). The bacteria of milk, butter, and cheese; communicable diseases in their relation to the dairy; contamination by air, water, utensils; desirable and undesirable fermentation. Two lectures. Winter quarter. Two credits.

T. Th. 8:00. *Mr. Carter*

6. Rural Water Supply and Waste Disposal. Methods

of (a) supplying farm and rural communities with sanitary water; (b) handling waste of the farm and small town. Three lectures. Spring quarter. Three credits.

M. W. F. 11:00. *Professor West*

7. Dairy Bacteriology (Laboratory) (Bacteriology 5b). Methods used in the bacteriological examination of milk and dairy products. May accompany Dairy Bacteriology 5. Three laboratory periods. Breakage deposit $2.50. Winter quarter. Three credits.

M. W. F. 2:00 to 5:00. *Mr. Carter*

8. Sanitary Statistics (Bacteriology 9). Vital statistics showing the effects of sanitary precautions upon health in cities and rural communities. Two lectures. Spring quarter. Two credits.

T. Th. 8:00. *Mr. Carter*

AGRONOMY

Professor F. S. Harris
Associate Professor George Stewart
Mr. D. W. Pittman
Mr. I. J. Jensen

Note: Students who major in Agronomy are required to take courses 1, 2 or 3, 6, 8 or 9, 10, 12, and Farm Management 1.

VOCATIONAL COURSES

a. Elementary Agronomy. Practical information on crops and soils for short practical-course students. Lectures, recitations, and laboratory work. Three lectures and one laboratory. Winter quarter. Four credits.

Lec. T. Th. S. 10:00; lab. M. 2:00 to 5:00. *Mr. Jensen*

b. Dry-Farming. The methods best adapted to the growing of profitable crops on arid lands; the treatment of the soil; the soils and crops best adapted to arid-farming; the regions offering favorable conditions for its successful practice. Three lectures. Winter quarter. Three credits.

M. W. F. 10:00. *Mr. Jensen*

JUNIOR COLLEGE COURSES

1. Cereal Crops. The history, cultivation, production, and marketing of cereal crops; a basis for judging and grading plant products. Must be preceded or accompanied by Botany 2. Three lectures, and one laboratory. Fall quarter. Four credits.

Lec. M. W. F. 9:00; lab. T. 2:00 to 5:00.

Associate Professor Stewart

2. Root Crops. Sugar-beets, potatoes, mangels, turnips, other root crops, and beans. Cultural methods, market types, and commercial possibilities are studied in detail. Must be preceded or accompanied by Botany 2. Three lectures and one laboratory. Winter quarter. Four credits.

Lec. M. W. F. 9:00; lab. T. 2:00 to 5:00.

Associate Professor Stewart

3. Forage and Miscellaneous Crops. Alfalfa, clovers, grasses, and other crops. Methods of handling hay, meadow and pasture management, and soiling crops are discussed. Must be preceded or accompanied by Botany 2. Three lectures and one laboratory. Spring quarter. Four credits.

Lec. M. W. F. 9:00; lab. T. 2:00 to 5:00.

Associate Professor Stewart

4. Seeds and Weeds. Seeds and their impurities; quality and preservation of seeds; their storage, shrinkage, vitality, etc.; the common weeds of Utah; methods of identifying and eradi-

ating them; field work. Prerequisites, Botany 1 or 2 and Agronomy 1. One lecture and one laboratory. Fall quarter. Two credits.

Lec. F. 1:00; lab. F. 2:00 to 5:00.

Associate Professor Stewart

10. Irrigation and Drainage Practice (Irrigation and Drainage 1). Water measurement, effect of soil and plant on time and frequency of irrigation, duty of water, design of farm ditches and preparation of land for irrigation, pumping for irrigation, and methods of farm drainage. Designed especially for students in agriculture. Three lectures and two laboratories. Sec. 1, Fall quarter; sec. 2, Spring quarter. Five credits.

Lec. M. W. F. 8:00, Fall or Spring.

Lab T. Th. 2:00 to 5:00, Fall or Spring.

Associate Professor Israelson and Mr. Fife

SENIOR COLLEGE COURSES

5. Judging and Grading Crops. The various methods of scoring grains and other crops; judging crops and identifying varieties; types demanded by the market; grading of market types. Prerequisites, Agronomy 1; Agronomy 2 and 3, and Horticulture 1 preferred. One lecture and one laboratory. Spring quarter. Two credits.

(Not given in 1919-1920.) *Associate Professor Stewart*

6. Soils. Review of the entire field of soil study; designed as a foundation course for all students of agriculture. Prerequisite, Chemistry 1; Physics and Geology 2 preferred. Three lectures and one laboratory. Fall quarter. Four credits.

Lec. M. W. F. 11:00; lab. W. 2:00 to 5:00.

Associate Professor Stewart and Mr. Pittman

7. Comparative Soils. Soils of the world; their origin,

composition, and agricultural value; soil provinces of the United States, especially those of the arid regions; the soils of Utah, the crops adapted to them, and their treatment. Prerequisite, Agronomy 6. Two lectures and one laboratory. Winter quarter. Three credits.

Lec. W. F. 12:00; lab. F. 2:00 to 5:00.

Associate Professor Jennings

8. Management of Arid Soils. The composition, nature, and management of soils of arid regions; special attention to water relations, alkali, rotations, manure, tillage, and other problems in the management of arid soils. Prerequisite, Agronomy 6. Two lectures and one laboratory. Spring quarter. Three credits.

Lec. W. F. 12:00; lab. W. 2:00 to 5.00.

Associate Professor Stewart and Mr. Pittman

9. Field Crop Improvement. Varieties of field crops and their adaptation, selection, and improvement; attention to the methods of plant-breeding as practiced in America and Europe. Prerequisites, Agronomy 1 and 2 or 3; Genetics (Zoology 7) preferred. Three lectures. Spring quarter. Three credits.

M. W. F. 11:00. *Associate Professor Stewart*

11. Advanced Laboratory in Soils. Chemical and mechanical analysis or special laboratory work. Three hours or more, any quarter.

Hours to be arranged. *Professor Harris*

12. Seminar. Current agronomic literature; agricultural problems; assigned topics. Required of seniors in agronomy; open also to juniors. Winter quarter. One credit.

S. 11:00.

Associate Professor Stewart and Professor Harris

13. Research. Seniors specializing in agronomy may elect research in any branch of the subject. Time and credit to be arranged with the instructor. *Professor Harris*

14. *History of Agriculture (History 8). Development of agriculture, with emphasis on social and scientific phases; the successive steps by which modern agriculture has attained its present status. Two lectures. Winter quarter. Two credits.
T. Th. 10:00. *Associate Professor Stewart*

ANIMAL HUSBANDRY

Professor W. E. Carroll
Associate Professor George B. Caine.
Assistant Professor Byron Alder.

VOCATIONAL COURSES

c. Feeding and Management. A non-technical course dealing with the practice of feeding and management of different classes of livestock. Five lectures. Winter quarter. Five credits.
Daily except Saturday, 9:00. *Professor Carroll*

JUNIOR COLLEGE COURSES

1. Market Types. The judging of market types of horses, cattle, sheep, and swine. Some score card practice is given, but most of the work is comparative judging of groups of animals. Three lectures and two laboratory periods. Fall or Winter quarter. Five credits.
Lec. T. Th. S. 9:00; lab. W. F. 2:00 to 5:00
Associate Professor Caine

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*Students may apply credit for this course either in the Department of Agronomy or that of History.

2. Breed Types. The origin, history, and characteristics of the different breeds of horses, cattle, sheep, and swine, especial stress being laid upon their adaptability to western conditions. Five lectures. Winter quarter. Five credits.

Daily except Saturday, 10:00. *Associate Professor Caine*

3a. Practical Feeding. How the animal uses its feed; classes of feeds; compounding rations for different purposes and for different classes of animals. Prerequisite, Chemistry 1. Five lectures. Fall quarter. Five credits.

Daily, except Saturday, 8:00. *Professor Carroll*

6. Beef Cattle Production. The practical methods of beef production, including a consideration of range practice, feeding for market, fitting for show, the general care and management. Three lectures. Fall quarter. Three credits.

M. W. F. 12:00. *Associate Professor Caine*

7. Horse Husbandry. Market types, handling of breeding and growing horses, fitting for show and sale, and practical methods of handling and training horses. Three lectures. Winter quarter. Three credits.

(Not given in 1919-20.) *Associate Professor Caine*

8. Swine Management. The management of the breeding herd, fattening for market, and fitting for show. Three lectures. Spring quarter. Three credits.

M. W. F. 12:00. *Associate Professor Caine*

9. Sheep Husbandry. General care on range and farm, fattening for market, fitting for show, and work in grading and sorting wool.

(Not given in 1919-20.)

SENIOR COLLEGE COURSES

3. Animal Nutrition. The anatomy and physiology of the digestive system; the purpose of nutrition; the theory and practice of feeding, with especial reference to Utah conditions. Prerequisite, Organic Chemistry or Physiology 2. Five lectures. Winter and Spring quarters. Five credits each quarter.

Daily except Saturday, 8:00. *Professor Carroll*

4. Principles of Breeding and Herd Book Study. An application of the principles of breeding to practical breeding operations; the place of animal breeding on the farm; methods of selection; aids to selection; grading; cross breeding; line breeding; inbreeding; herd books; pedigrees of noted individuals of the important breeds. Prerequisite, Zoology 3. Spring quarter. Five credits.

Daily except Saturday, 9:00. *Professor Carroll*

5. Advanced Stock Judging. The judging of groups of animals of all classes. Attendance at the State Fair and at all accessible county fairs is required. Prerequisites, Animal Husbandry 1 and 2. Three laboratory periods. Fall quarter. Three credits.

Lab. M. W. F. 2:00 to 5:00. *Associate Professor Caine*

10. The Field of Animal Husbandry. A brief survey of the field of animal husbandry in relation to other branches of agriculture; the economics of the livestock business, and a brief consideration of the various opportunities in livestock. Designed as an informational course for students not registered in the School of Agriculture. Three lectures. Fall quarter.

M. W. F. 9:00. *Professor Carroll*

20. Research. Advanced students may elect research work in any phase of animal husbandry. Time and credit to be arranged with the department.

25. Seminar. Round-table discussions of current literature and special phases of animal husbandry and dairying by advanced students and instructors of the department. One meeting a week. Time to be arranged.

Professor Carroll and Associate Professor Caine

POULTRY HUSBANDRY

VOCATIONAL COURSES

a. Practical Poultry Raising. A study of the fundamental principles involved in successful poultry raising. Three lectures and one laboratory period per week. Winter quarter. Four credits.

Lec. M. W. F. 9:00; lab. Th. 2:00 to 5:00.

Assistant Professor Alder

b. Short Practical Course. A short practical course covering a period of two weeks. The student can spend all day or half the day studying problems of successful poultry raising.

Time to be announced. *Assistant Professor Alder*

JUNIOR COLLEGE COURSES

1. General Poultry. A study of breeds, judging, breeding, incubation, brooding, housing, feeding, and marketing. Three lectures and one laboratory period per week. Fall and Winter quarters. Four credits per quarter.

Lec. M. W. F. 12:00; lab. T. 2:00 to 5:00.

Assistant Professor Alder

1a. General Poultry. Same as Poultry 1 except that no laboratory work is given. Three lectures per week. Fall and Winter quarters. Three credits per quarter.

M. W. F. 12:00. *Assistant Professor Alder*

1b. General Poultry. About 80% of the poultry products of the State is accredited to women. This course is planned to meet the needs of Home Economic students. Two lecture periods per week. Spring quarter. Two credits.

T. Th. 12:00. *Assistant Professor Alder*

2. Incubation and Brooding. Practical and experimental work: the factors which influence the hatching quality of eggs and the raising of chicks. Prerequisite, Poultry 1. Two lecture periods per week. Spring quarter. Two credits.

W. F. 12:00. *Assistant Professor Alder*

3. Poultry Management. The housing, care, feeding, and management of different breeds under western conditions. Prerequisite Poultry 1. Two lectures and one laboratory period per week. Winter quarter. Three credits.

Lec. W. F. 11:00; lab. morning and evening.

Assistant Professor Alder

4. Breeds and Breeding. The origin and development of the breeds and varieties of poultry; practice in judging; a review of the literature on breeding for utility and exhibition. Prerequisite, Poultry 1. Two lecture and one laboratory periods per week. Winter quarter. Three credits.

Lec. T. Th. 10:00; lab. by special arrangement.

Assistant Professor Alder

SENIOR COLLEGE COURSES

25. Research. Research work in special problems. Prerequisite Poultry 1. Time and credit to be arranged.

Assistant Professor Alder

ART DEPARTMENTS

FINE ART.

PROFESSOR POWELL

JUNIOR COLLEGE COURSES.

1. COMPOSITION. Nature analysis and application to design. A study of composition of line and form and the principles of good taste. Prerequisite or parallel, Textiles and Clothing 1 or "e." Fall quarter. Three credits.

Daily, except Saturday, 8:00. Sec. a—*Professor Powell*
Sec. b—*Professor Fletcher*

2. ART APPRECIATION. The aim of this course will be to develop judgment and taste. A study of the principles of composition and design and their application to painting, sculpture, and architecture. Prerequisite or parallel, Textiles and Clothing 1b or "e." Spring quarter. Two credits.

Daily, except Saturday, 8:00. Sec. a—*Professor Powell*
Sec. b—*Professor Fletcher*

3. INDUSTRIAL DRAWING AND TECHNICAL SKETCHING. Free hand drawing and sketching in straight line projection and pictorial methods. The principles of perspective and free hand lettering. The aim of this course is to develop a proficiency in free hand sketching for engineers, inventors, designers, draftsmen, mechanics, and contractors. Any quarter. Three studio hours, 1 credit. Student may elect 1 or more credits.

Daily, except Saturday, 2:00 to 5:00. *Professor Powell*

4. HISTORY OF ART AND APPRECIATION. Illustrated lectures and discussions. This course is given so students may

gain an acquaintance with painting, sculpture, and architecture and to develop a taste for the best art. Winter quarter. One credit.

M. 4:00 to 5:00. *Professor Powell*

5. Studio. Before registering, students must consult with instructor in charge. Sec. 1, one credit; sec. 2, two credits; sec. 3, three credits. (Three hours in studio for one credit.) Students may elect one or more credits.

5a. Free Hand Drawing from ornament, antique, still life, animals, and life.

5b. Painting in oil, water color, pastel from still life, landscape, animals, and life.

5c. Sculpture modeling in wax and clay and casting in plaster, from ornament, antique, and life.

5d. Illustration, including cartooning and caricature, for book, magazine, and newspaper.

5e. Illustration for advertising, designing posters and pictorial advertisements, and advertising arrangement. Are 27g, *Lettering,* must accompany or precede this course for at least one term.

5f. Illustration for scientific purposes, given conjointly with the departments of Agronomy, Botany, Entomology, etc.

5g. Pictorial composition and critical judgment of pictures adapted to the layman, photographer, and the painter.

Daily, except Saturday, 2:00 to 5:00 *Professor Powell*

6. History of Art. (History 10). Winter quarter. Three credits.

M. W. F. 1:00. *Professor Powell*

7. Aesthetics (English 21). The principles of beauty as fundamental to all the arts. Spring quarter. Five credits.

(Not given in 1919-20.) *Professor Fletcher*

APPLIED ART

PROFESSOR FLETCHER

JUNIOR COLLEGE COURSES

21. DESIGN. Study of the principles of design in pattern, color, house furnishings, and costume. Prerequisite Art 1. Winter quarter. Two credits.

Lec. F. 8:00; lab. M. T. W. Th. 8:00.

Sec. 1—*Professor Powell*
Sec. 2—*Professor Fletcher*

24. HOME IMPROVEMENT. Design in the architecture of home buildings and grounds. Common errors in the composition of cottage exteriors, interiors, and landscape gardens will be discussed and remedies suggested. For related work see Horticulture 8 and Rural Architecture 10. Two lectures and three laboratories per week. Spring quarter. Three credits.

Lec. T. Th. 10:00; lab. F. 2:00 to 5:00 *Professor Fletcher*

26. FURNITURE DESIGN. Furniture and ornamental metal design. Any quarter. Three hours per week each quarter for one hour of credit.

Hours to be arranged. *Professor Fletcher*

SENIOR COLLEGE COURSES

22a. HOUSE FURNISHING. (Household Administration 22a). House furnishing and decoration. Consideration of the principles governing good taste in house exterior and garden designs, wall decoration, floors, ceilings, color, and furniture selection and arrangement. Prerequisites Art 1, 21, and 2 or equivalent. Open to students in the Junior College. Fall quarter. Four credits.

Lec. M. W. F. 1:00; lab. F. 2:00 to 5:00 *Professor Fletcher*

22b. Home Furnishing. (Household Administration 22b). Textiles and drapery, tableware, pottery, pictures, sculpture, flowers, and the assembling of all features which go to make home beautiful. Open to students in the Junior College. Winter quarter. Four credits.

Lec. M. W. F. 1:00; lab. F. 2:00 to 5:00.

Professor Fletcher

25. Interior Decoration. Interior design and decoration For specialists and tradesmen. Wall tinting, and decoration, house painting, wood finishing, furnishing and draping, and making of sketches for the client. Any phase of the work may be taken up to suit the needs of the student. Before registering for this course students must consult the instructor. Open to students in the Junior College. Any quarter. Three hours in studio for each credit.

Hours to be arranged. *Professor Fletcher*

27. Studio. Hours selected must be arranged with the instructor in charge. Open to students in Junior College. Studio open daily from 9:00 to 11:00 and 1:00 to 5:00. Sec. 1, one credit; sec. 2, two credits; sec. 3, three credits. (Three hours work in studio each week for one quarter for one credit).

27a. Pottery.

27b. China decoration and design.

27c. Copper, brass, and silver smithing. The underlying principles of metal treatment, including sawing, raising, soldering, repousse and enameling.

27d. Jewelry. Stone setting, hard soldering, enameling, repousse, chasing, casting, etc.

27e. Basketry, weaving, and bead work.

27f. Leather work, including tooling and modeling, etching, piercing, applique, inlay, dyeing, etc.

27g. Show card and sign writing, advertising arrangement, etc.

27h. Textile decoration, combining block printing, stenciling, batik, and needle craft.

27i. Wood ornamentation, including enamelac, carving, inlay, jesso work, staining and painting.

27j. Architectural composition. Advanced. Prerequisite, Rural Architecture 10 and 11.

27k. Special design for crafts or commercial purposes. Parallel to Art Needlework.

Hours to be arranged. *Professor Fletcher and Miss———*

Note: One or more examples of each student's work may be retained by the department but compensation may be allowed for material.

BACTERIOLOGY AND PHYSIOLOGICAL CHEMISTRY

Professor Greaves
Mr. Carter
Mr. Goldthorpe
Mr. Lund

VOCATIONAL COURSES

a. Rural Sanitation. (Rural Sanitation 1). An elementary course dealing with bacteria in relation to agriculture. The nature, cause, and prevention of communicable diseases, the sanitary necessities of the community and the individual are considered. Three lectures. Winter quarter. Will be given in 1919-20 if registration justifies. Three credits.

M. W. F. 8:00. *Mr. Carter*

JUNIOR COLLEGE COURSES

1. General Agricultural Bacteriology. Biology and significance of bacteria. Introduction to microbiology of air,

water, soil, and milk considered in relation to the various phases of agriculture. Three lectures. Two laboratory periods. Breakage deposit $2.50. Fall quarter. Five credits.

Lec. M. W. F. 10:00; lab. W. F. 2:00 to 5:00.

Professor Greaves

2. General Bacteriology. Biology and significance of bacteria, microbiology of air, water, milk, food, and of human and animal diseases. Three lectures. Two laboratory periods. Breakage deposit $2.50. Spring quarter. Five credits.

Lec. M. W. F. 9:00; lab. T. Th. 2:00 to 5:00.

Professor Greaves

SENIOR COLLEGE COURSES

3. Pathogenic Bacteriology. Fundamentals, morphology, biology, function, etc. The pathogenic bacteria are considered in relation to specific diseases especially with regard to the subject of immunity. Prerequisite, Bacteriology 1 or 2. Three lectures. Two laboratory periods. Breakage deposit, $2.50. Winter quarter. Five credits.

Lec. M. W. F. 1:00; lab. W. F. 2:00 to 5:00.

Professor Greaves

4a. Soil Bacteriology. (Lecture). Bacteria are considered in relation to soil fertility. Influence of physical and chemical properties of a soil upon its bacterial life; ammonification, nitrification; and nitrogen fixation. Chemical methods of interpreting bacterial fermentations. Two lectures. Winter quarter. Two credits.

T. Th. 1:00. *Professor Greaves*

4b. Soil Bacteriology. (Laboratory). Methods used in soil bacteriological investigation. May accompany Bacteriology 4a. Prerequisite, Bacteriology 1. Three laboratory periods. Breakage deposit $2.50. Winter quarter. Three credits.

Lab. M. W. F. 2:00 to 5:00. *Professor Greaves*

5a. Dairy Bacteriology (Lecture). (Rural Sanitation 5). The bacteria of milk, butter, and cheese; communicable diseases in their relation to the dairy; contamination by air, water, utensils, desirable and undesirable fermentation. Two lectures. Winter quarter. Two credits.

T. Th. 8:00. *Mr. Carter*

5b. Dairy Bacteriology (Laboratory). (Rural Sanitation 7). Methods used in the bacteriological examination of milk and dairy products. May accompany Bacteriology 5a. Prerequisite, Bacteriology 1 or 2. Three laboratory periods. Breakage deposit $2.50. Winter quarter. Three credits.

Lab. M. W. F. 2:00 to 5:00. *Mr. Carter*

6. Sanitary Analysis. (Rural Sanitation 4). Methods used by the sanitary inspector in examining water, milk, and other foods. Prerequisites, Chemistry 6 and Bacteriology 1 or 2. Breakage deposit $2.50. Time and credit to be arranged.

Professor Greaves

7. Research. The laboratory and library facilities are especially arranged for advanced students in bacteriological investigation in agriculture, household science, the industries, sanitary science, and veterinary science. Time and credit to be arranged.

Professor Greaves

8. Sanitation (Rural Sanitation 3). Principles of sanitation; nature of disease, its spread, and means of prevention and disinfection; sanitary arranging and construction of farm buildings. Prerequisite, Bacteriology 1 or 2. Three lectures. Fall, Winter and Spring quarters. Three credits each quarter.

M. W. F. 11:00. *Professor Greaves*

9. Sanitary Statistics. (Rural Sanitation 8). Vital

statistics showing the effects of sanitary precautions upon health in cities and rural communities. Two lectures. Spring quarter. Two credits.

T. Th. 8:00. *Mr. Carter*

10. Physiological Chemistry. (Chemistry 7). The transformations going on in the plant and animal organism. Prerequisite, Chemistry 2 or 18. Five lectures. Fall quarter. Five credits.

Daily, except Saturday, 8:00. *Professor Greaves*

11. Physiological Chemistry. (Laboratory). May accompany the preceding course. Two laboratory periods. Breakage deposit $2.50. Fall quarter. Two credits.

Hours to be arranged. *Mr. Carter*

12. Military Sanitation. Diseases of the soldier, sanitation of camp, water, and food. Two lectures. Fall quarter. Two credits.

T. Th. 8:00. *Mr. Carter*

13. Advanced Biochemistry. The chemical reaction in the plant and animal organism. Two lectures. Fall, Winter, and Spring quarters. Two credits each quarter.

T. Th. 9:00. *Professor Greaves*

14. School Sanitation. Sanitary problems confronting the teacher in the rural and urban district. Spring quarter. Three credits.

M. W. F. 8:00. *Mr. Carter*

15. Advanced Bio-Chemistry. Bacteriological and chemical methods used in the diagnosing of diseases. Winter quarter. Five credits.

Laboratory to be arranged. *Professor Greaves*

BOTANY

Professor George R. Hill
Associate Professor Richards
Mr. Nuffer

VOCATIONAL COURSES

a. Elementary Plant Pathology. Plant diseases of Utah, their nature, cause and control. For practical-course students. Two lectures, and one laboratory period. Winter quarter. Three credits.

Lec. T. Th. 8:00; lab. W. 2:00 to 5:00.

Professor Hill and Mr. Nuffer

JUNIOR COLLEGE COURSES

1. General Botany. A brief survey of the field of plant life; the nature and development of plants; plant parts and their functions; the food of plants; the relation of plants to human needs; noteworthy wild and cultivated plants. Three lectures and two laboratory periods. Five credits. Spring quarter.

Lec. M. W. F. 9:00; lab. M. or T. and Th. or F. 2:00 to 5:00.

Associate Professor Richards and Mr Nuffer

2a, 2b, 2c. Plant Physiology, Anatomy, Morphology, and Classification. Plant physiology in relation to crop production is the basis of this course. Designed especially for students in agriculture. Required for major or minor in botany. Prerequisite or parallel, Chemistry 1. Students may register for Botany 2b without 2a only by permission. Three lectures, and two laboratory periods. Fall, Winter, and Spring quarters. Five credits each quarter.

Lec. M. W. F. 8:00; lab. M. or T. and Th. or F. 2:00 to 5:00

Professor Hill and Mr. Nuffer

SENIOR COLLEGE COURSES.

3. Flowering Plants. Our common plants and their relationships; special emphasis given to economic plants. Two lectures, and one, two, or three laboratory periods. Prerequisite, Botany 1 or Botany 2. Spring quarter. Repeated Summer quarter. Three, four, or five credits.

Lec. T. Th. 8:00; lab. S. 8:00 to 1:00, and any afternoon 2:00-5:00. *Associate Professor Richards and Mr. Nuffer*

3a. A continuation of Course 3, extending thru the summer; a consideration of the general summer flora or of particular families and their distribution. A laboratory course. Two to five credits according to work done. Prerequisite, Botany 3. This course may be taken thru correspondence.

4. Plant Physiology. An advanced course dealing with the water relations of plants; absorption, metabolism, and growth and factors effecting it. Prerequisite, Botany 2. Three lecture and two laboratory periods. Five credits.

(Not given in 1919-20.)

5. Plant Pathology. The history, nature, cause, and control of plant diseases. Two lectures and one to three laboratories per week. Fall quarter. Three to five credits.

Lec. T. Th. 8:00; lab. W. and two other afternoons 2:00 to 5:00 *Professor Hill and Mr. Nuffer*

6. Mycology.

(Not given in 1919-20.)

7. Morphology.

(Not given in 1919-20.)

8. Materials and Methods in Botanical Technic. Collection and preservation of botanical specimens. Preparation of botanical materials and slides for class room study and exhibition purposes. Designed particularly for teachers of botany. Prerequisite, Botany 1 or 2. A laboratory course. Any quarter. Two to five credits. *Associate Professor Richards and Mr. Nuffer*

9. Forestry. The principles of sylviculture and forest management, and western forest and range problems. Prerequsite, Botany 1 or 2.

(Not given in 1919-20.)

10. Dendrology. Structure and properties of wood; economic woods, their indentification and uses. Prerequisite, Botany 1 or 2. Botany 9 and Physics should also precede the course. One lecture and one laboratory period. Spring quarter. Two credits.

Time to be arranged. *Professor Hill*

11. Ecology. The distribution and adaptation of plants in relation to temperature, nature, light, soil, alkali, and other environmental factors.

(Not given in 1919-20.)

12. Seminar. Current literature in the field of botany. One hour a week. Fall, Winter, and Spring quarters. One credit each quarter.

Time to be arranged. *Professor Hill*

13. Research. Open to qualified Senior College students. Time and credit to be arranged. *Professor Hill*

CHEMISTRY

Professor R. L. Hill
Professor F. L. West
Professor J. E. Greaves
Assistant Professor C. T. Hirst
Mr.————————

JUNIOR COLLEGE COURSES

1. Inorganic Chemistry. The properties and preparation of the elements and their ordinary compounds. The quantitative laws of chemical combination and their applications. The

effects of temperature and concentration in displacing chemical equilibria. Arranged primarily for students in Home Economics. Prerequisite, High School chemistry.

Sec. 1. Two lectures and one laboratory period a week, Fall, Winter, and Spring quarters. Three credits each quarter.
Lec. T. Th. 1:00; lab. T. or F. 2:00 to 5:00.

Sec. 2. Three lectures and two laboratory periods per week. Winter and Spring quarters. Five credits each quarter.
Lec. M. W. F. 12:00; lab. T. Th. 2:00 to 5:00.

Sec. 3. Three lectures and two laboratory periods per week. Fall and Winter quarters Five credits each quarter.
Lec. T. Th. S. 10:00; lab. M. W. 2:00 to 5:00.
Assistant Professor Hirst

2. Organic Chemistry. Fundamental principles of organic chemistry. The chemistry of the carbon compounds. Special attention will be paid to the chemistry of proteins, carbohydrates, fats. Prerequisite, Chemistry 1. Four lectures and two laboratory periods. Fall quarter. Six credits.
Lec. M. W. F. S. 8:00; lab. M. W. 2:00 to 5:00.
Professor R. L. Hill

3. Organic Chemistry. A laboratory course dealing with the fundamental principles of organic chemistry. This course is designed for students in Chemistry 18. Two laboratory periods a week. Fall and Winter quarters. Two credits each quarter.
Lab. M. W. 2:00 to 5:00. *Professor R. L. Hill*

18. Organic Chemistry. A course arranged especially for students in Home Economics. This course in most respects will duplicate the lecture work in Chemistry 2, but special emphasis will be placed on the chemistry of the proteins, carbohydrates, fats, food adulterants and preservatives, common

disinfectants, and anaesthetics. Prerequisite Chemistry 1. Three lectures per week. Fail and Winter quarters. Three credits each quarter.

M. W. F. 12:00. *Professor R. L. Hill*

4. Qualitative Analysis. A course in the theory and practice of inorganic qualitative analysis. Prerequisite Chemistry 1. One lecture and eight hours laboratory per week. Fall and Winter quarters. Three credits each quarter.

Lec. T. 2:00; Lab. T. 3:00 to 5:00, Th. F. 2:00 to 5:00.
Assistant Professor Hirst

6. Quantitative Analysis. A course in the theory and application of the fundamental principles of gravimetric and volumetric analysis to inorganic, agricultural, and food analysis, Prerequisite, Chemistry 4. One lecture and eight hours laboratory. Fall and Winter quarters. Three credits each quarter.

Lec. Th. 2:00; Lab. Th. 3:00 to 5:00; T. F. 2:00 to 5:00.
Assistant Professor Hirst

7. Physiological Chemistry. (Bacteriology and Physiological Chemistry 10). The chemical transformations occuring in plant and animal organisms. Prerequisite, Chemistry 2. or 18. Fall quarter. Five credits.

Daily, except Saturday at 8:00. *Professor Greaves*

SENIOR COLLEGE COURSES

8. Industrial Chemistry. The application of chemistry in the manufacture and uses of various substances such as cements, fertilizers, gases, explosives, paints, pigments, soaps, sugar, starch, paper, potash, salt, sulphuric acid, and in the smelting of ores will be studied. Arrangements will be made for the class to visit the leading industrial plants of the State. Three

lectures and thirty-six hours of field work visiting industrial plants. Winter quarter. Four credits.

Lec. T. Th. S. 8:00; field work to be arranged with class.

Professor R. L. Hill

9. Research. Senior students specializing in chemistry may elect research in any branch of the subject. Time and credit to be arranged with the instructor.

Professor R. L. Hill

10. Special Course in Quantitative Analysis. Prerequisite Chemistry 6. Time and credit to be arranged with instructor.

a. Water analysis.
b. Food analysis.
c. Soil analysis.
d. Urine analysis.
e. Gas analysis.

Professor R. L. Hill and Assistant Professor Hirst

13. General Organic Reactions. A consideration of the more important reactions employed in synthetic organic chemistry. Prerequisite, Chemistry 2 or equivalent. Two lectures a week. Fall quarter. Two credits.

(Not given in 1919-20). *Professor R. L. Hill*

14. The Nitrogen Compounds. A course devoted primarily to the proteins, alkaloids and purine derivatives. Prerequisite Chemistry 2. Two lectures a week. Winter quarter. Two credits.

W. F. 8:00. *Professor* ———

15. Organic Preparations. An advanced laboratory course in practical laboratory methods of synthetic organic chemistry. Prerequisite, Chemistry 2. Nine hours a week. Fall or Winter quarter. Three credits.

Time to be arranged. *Professor R. L. Hill*

16. Physical Chemistry. (Physics 5). The kinetic theory, solutions, thermo-chemistry, and electro-chemistry. Prerequisite, Chemistry 1 and Physics 1. Three lectures a week. Winter quarter. Three credits.

Lec. M. W. F. 8:00. *Professor F. L. West*

17. History of Chemistry. Two lectures a week. Prerequisites, Chemistry 1, 2, and 16. Fall and Winter quarters. Two credits each quarter.

M. W. 10:00. *Professor R. L. Hill*

DAIRY HUSBANDRY

Associate Professor George B. Caine

Mr.————

JUNIOR COLLEGE COURSES

1. Elements of Dairying. The secretion and composition of milk; testing for fat, acid, and adulterants; dairy sanitation; pasteurization; separation; making of butter and cheese. Prerequisites, Chemistry 1, and Bacteriology 1. Three lectures and two laboratory periods. Winter and Spring quarters. Five credits each quarter.

Lec. M. W. F. 1:00; lab. to be arranged *Mr.————*

2. Dairy Technology. The production, preparation, and food value of sanitary, certified, modified, fermented, dried, and condensed milks, the manufacture of butter, cheese, soft cheese, ice cream, renovated butter, oleomargarine, milk sugar, casein, etc. Prerequisites, Chemistry 1 and Bacteriology 1. Five lectures and one laboratory period. Winter quarter. Six credits.

Daily, except Monday 8:00; lab. to be arranged.

Mr. ————

SENIOR COLLEGE COURSES

3. Dairy Production. A brief review of breeds of dairy cows; starting a herd; herd management. Each student submits an original plan of a dairy farm, estimating values of property, expense of operation, and profits to be derived. Five lectures and one laboratory. Spring quarter. Six credits.

Daily except Saturday, 9:00; lab. to be arranged.

Associate Professor George B. Caine

4. Buttermaking. Designed to meet the needs of the creameryman. Prerequisite, Dairying 1. Time and credit to be arranged. *Mr.*———

5. Cheese Making. The manufacture, curing, and storage of the various standard kinds of cheese. Prerequisite, Dairy 1. Time and credit to be arranged.

Mr.———

6. Research Work. Important dairy subjects; a digest of recent dairy work of the experiment stations. Time and credit to be arranged with the department.

ECONOMICS

Professor Hendricks
Associate Professor Wallin
Assistant Professor Robinson
Mr. Barber

See Political Science and Sociology for related work.

VOCATIONAL COURSES

a. Economics of Business. An elementary course dealing with the laws of economics, and designed for the students in the short, practical course. Winter quarter. Three credits.

M. W. F. 12:00. *Mr. Barber*

b. Business Organization. Elementary course in the organization of business; designed especially for students in short, practical courses. Fall quarter, first term. One and a half credits.

M. W. F. 12:00. *Mr. Barber*

c. Elementary Business Finance. Elementary study of the methods in financing a business under modern industrial conditions; designed for students in short, practical courses. Fall quarter, second term. One and a half credits.

M. W. F. 12:00. *Mr. Barber*

JUNIOR COLLEGE COURSES

1. Elements of Economics. The laws of man's economic activity, as the basis of a scientific understanding of industrial conditions. Topics: economic want, value, rent, wages, profits, interest. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 8:00. *Associate Professor Wallin*

3. History of Commerce. Its development in Egypt, Greece, Rome, Florence, Medieval Europe; the commercial nations of modern times. Six credits.

(Not given in 1919-20).

5. Industrial Resources. The resources of the United States, with special emphasis on Western agricultural, pastoral, mineral, soil, and water resources. See Geology 3.

(Not given in 1919-20).

9. Advertising. The literature of advertising; the make-up of advertisements for newspapers and magazines; the psychology of advertising; much practical experience in the writing of advertisements. Fall quarter. Three credits.

M. W. F. 10:00. *Assistant Professor Robinson*

12. Agricultural Economics. Economic principles underlying farm management, land tenure, general farming operations, and rural life. Special attention is given to western conditions. Fall quarter. Three credits.
M. W. F. 11:00. *Professor Hendricks*

13. Rural Credits. Land settlement; cooperative banking, other agrarian legislation. Winter quarter. Three credits.
M. W. F. 11:00. *Professor Hendricks*

19. Salesmanship. A study of the underlying principles as they apply not only to the salesman but to the sales manager. Practical demonstrations will be required of students. Winter quarter. Three credits.
M. W. F. 10:00. *Assistant Professor Robinson*

SENIOR COLLEGE COURSES

2. General Economics. A comprehensive study of the fundamentals of economic theory. Winter and Spring quarters. Three credits each quarter.
T. Th. S. 10:00. *Professor Hendricks*

15. A Research Course in Economics. Time and credit to be arranged with the instructor.

16. College Economic Readings. Discussion of current economic literature. One credit each quarter.
Hours to be arranged.

17. Labor Problems. A discussion of fundamental principles underlying the labor problem. Attention will be given to boycotts, strikes, lockouts, industrial arbitration, labor legislation. The subtle relationships between labor and capital will be considered. Spring quarter. Three credits.
T. Th. S. 9:00. *Associate Professor Wallin*

18. Insurance. A discussion of fundamental principles of insurance. Attention will be given to the practices of modern insurance companies as they affect the insured, the beneficiary and the State. Spring quarter. Three credits.

Hours to be arranged.

ENGLISH

Professor Pedersen
Assisitant Professor Ogburn
Assistant Professor Kyle

VOCATIONAL COURSES

b. Elementary English. Fundamentals of good writing, reading, and speaking. Grammar, spelling, punctuation Composition applied to business letters and commercial forms. Study and oral reading of easy classics. Students may enter at any quarter. Five recitations a week. Fall, Winter, and Spring quarters. Three credits each quarter.

Daily except Saturday 8:00. *Assistant Professor Ogburn*

c. Review of Grammar. Oral and written composition. Practice in writing letters and other business forms. Standard novels, essays, and plays will be read and discussed. Students may enter at any quarter. Three recitations a week. Fall, Winter, and Spring quarters. Two credits a quarter.

M. W. F. 11:00. *Assistant Professor Kyle*

JUNIOR COLLEGE COURSES

6. History of English Literature. The literature of Great Britain from the Anglo-Saxon period to the present day, with emphasis on the ages since Shakespere. Three lectures a week. Fall, Winter, and Spring quarters. Three credits each quarter.

Sec. 1, M. W. F. 8:00; Sec. 2, M. W. F. 1:00.

Sec. 1—*Assistant Professor Kyle*
Sec. 2—*Assistant Professor Ogburn*

7. Freshman Composition and Rhetoric.

Business English. Three recitations a week. Fall and Winter quarters. Three credits each quarter.

Sec. 1, M. W. F. 11:00. *Professor Pedersen*

Sec. 2, Winter and Spring quarters.

M. W. F. 2:00. *Assistant Professor Ogburn*

Literary Forms. Description, narratives, stories. Fall, Winter, and Spring quarters. Two credits each quarter.

Sec. 3, T. Th. 10:00. *Assistant Professor Ogburn*

Exposition. Fall, Winter, and Spring quarters. Two credits each quarter.

Sec. 4, T. Th. 9:00. *Assistant Professor Kyle*

SENIOR COLLEGE COURSES

8. Advanced Writing. Course is based on current models as found in Cunliffe and Lomer's "Writing of Today," which is used as a text. The training afforded should lead the student toward the magazine market. Prerequisite, Freshman Composition. Two recitations a week. Fall, Winter, and Spring quarters. Two credits each quarter.

T. Th. 10:00. *Professor Pedersen*

9. Recent Novel. Study of present day writers: Kipling, Hardy, Bennett, Galsworthy, Wells, Conrad, and others. Two lectures per week. Fall, Winter, and Spring quarters. Three credits each quarter.

T. Th. 9:00. *Professor Pedersen*

10. Shakspere. Detailed study in class of six plays: Macbeth, Henry the Fourth, King Lear, Hamlet, Othello, Twelfth Night. Collateral reading: various other Shakspearean plays as

well as a biography. Lecture three days a week. Fall, Winter, and Spring quarters. Three credits each quarter.
M. W. F. 9:00. *Professor Pedersen*

14. English Prose of the Nineteenth Century. The novel and the essay. Three lectures a week. Fall, Winter, and Spring quarters. Three credits each quarter.
M. W. F. 10:00. *Assistant Professor Kyle*

15. World Masterpieces. Study of the chief classics of general literature.
(Not given in 1919-20). *Assistant Professor Ogburn*

19. English Poets of the Nineteenth Century.
(Not given in 1919-20). *Assistant Professor Kyle*

20. Derating. Fall and Winter quarters. Two credits each quarter.
M. W. 1:00. *Professor Pedersen*

21. Aesthetics. (Art 7). Study of the correlation of the fine arts, and the principles governing sound judgment in each. Spring quarter. Five credits.
Daily 1:00. *Professor Fletcher*
(Not given in 1919-20).

25. Journalism. News collecting, history of journalism in America. Fall, Winter, and Spring quarters. Two credits each quarter.
M. W. 11:00. *Professor Arnold*

27. The Short Story. Literary and technical study of the short story. Winter quarter. Three credits.
M. W. F. 11:00. *Assistant Professor Ogburn*

30. Literature for Children. Study of the child and institutional factors affecting him; the child and the book; the adolescent and the book; types of literature for children; contri-

bution to children's literature of Greece, Rome, and other countries.

Spring quarter. Two credits.

T. Th. 1:00. *Professor Pedersen*

X. Drill in spelling, grammar, punctuation, sentence structure. Must be taken by any student whose English is not up to grade, as determined by any instructor in any course for which the student is registered. Anyone so assigned to the class must pass the course before he can graduate from the college. Winter quarter. (Repeat Spring). Non-credit.

T. Th. 8:00. *Assistant Professor Kyle*

ENTOMOLOGY

PROFESSOR W. W. HENDERSON
ASSISTANT PROFESSOR H. R. HAGAN*.

See Department of Zoology for related work.

JUNIOR COLLEGE COURSES

1. AGRICULTURAL ENTOMOLOGY. A general study of the insects of the intermountain region and of methods of control. Three lecture periods per week. Winter quarter. Three credits.

M. W. F. 1:00. *Professor Henderson*

2. SYSTEMATIC ENTOMOLGY. Enough of the structure of insects is studied to enable the student to use the tables employed in classification. Each student must collect, mount, and properly identify a representative collection of insects found in the vicinity of Logan. One lecture period per week. Fall, Winter, and Spring quarters. Three credits each quarter.

Lec. S. 9:00; Lab. T. Th. 2:00 to 5:00 *Professor Henderson*
(Not given in 1919-20.)

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*On leave of absence.

SENIOR COLLEGE COURSES

3. Economic Entomolgy. An advanced course treating in detail insects of the inter-mountain region and in addition, those of considerable importance in other states. The embryology, anatomy, and metamorphosis of insects are carefully studied. Reports required. Prerequisite, Agricultural Entomology. Three lecture and one laboratory periods per week. Winter and Spring quarters. Four credits each quarter.

Lec. T. Th. S. 9:00; Lab. T. 2:00 to 5:00.

Professor Henderson

4. Entomological Literature. Each student investigates and reports on the literature of some insect or insects of economic importance within his state. Historical development of entomology, current entomological literature, and bibliographies are considered. Prerequisite, Entomology 2 or 3. Three lecture periods per week. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 10:00. *Professor Henderson*

(Not given in 1919-20).

5. Research. Students may select or will be assigned certain problems dealing with different phases of entomology. The amount of credit will depend on the nature of the problems and the time spent. Thesis. Prerequisite, Entomology 2 or 3. Hours and credit to be arranged.

Professor W. W. Henderson

FARM MANAGEMENT

Professor E. B. Brossard

VOCATIONAL COURSES

a. Farm Management. A study of the essential farm records and the problems involved in choosing, buying, planning,

organizing, and managing a farm. Discussions of proper size, balance, diversity, and quality of farm business; relation of live stock, crops, pastures, and ranges; efficient use of equipment and man and horse labor. Five lectures. Winter quarter. Five credits.

Daily, except M. 8:00. *Professor Brossard*

JUNIOR COLLEGE COURSES

1. Farm Management. Simple farm accounts to determine labor income; single enterprise accounts; feed, labor, production, and miscellaneous records; complete farm cost accounts. Special emphasis is given to the analysis and interpretation of results and their application in the organization and management of the farm. Two one-half day field trips to take farm inventories, study field and building arrangements, and other factors affecting cost of production. Five lectures. Fall quarter. Five credits.

Daily, except M. 9:00. *Professor Brossard*

2. Farm Management. A study of the application of the principles involved in the collection, tabulation, and interpretation of agricultural statistics. This course is designed for students who major in Farm Management. Prerequisite, Mathematics 2. Five lectures. Five credits.

(Not given in 1919-20).

SENIOR COLLEGE COURSES

3. Farm Management. A study of the problems involved in choosing, buying, planning, organizing, and managing a farm; size, balance, diversity, and quality of farm business; relation of livestock, crops, pastures, and ranges; and the efficient use of equipment and man and horse labor. Five lectures. Winter quarter. Five credits.

Daily, except M. 9:00. *Professor Brossard*

4. Farm Management. A study of the natural and economic factors affecting types of farming in Utah, the United States, and other countries, with discussions of the problems of land settlement, land tenure, land utilization, contracts, and leases. Five lectures. Spring quarter. Five credits.

Daily, except M. 9:00. *Professor Brossard*

5. Farm Management. (Seminar). Discussions of current Farm Management literature; assigned topics. Required of senior and graduate students in Farm Management. One period each week. Fall, Winter, and Spring quarters. One credit each quarter. Time to be arranged.

Professor Brossard

6. Farm Management. (Research). Special investigations of problems in Farm Management. Only those senior and graduate students who present an acceptable plan for an investigation will be admitted. Credit will be granted according to the work done.

Time to be arranged. *Professor Brossard*

FARM MECHANICS AND AUTOMOBILES

Associate Professor Humphreys
Mr. A. H. Powell
Mr. Winchell

VOCATIONAL COURSES

a. Automobile and Tractor Course. Arranged for men who expect to specialize in auto mechanics. Full time devoted to forging, machine work, and the study of tractors and automobiles. Winter and Spring quarters.

Associate Professors Humpherys and Newey and Mr. Powell

b. Advanced Auto Repair. A continuation of the automobile work in Course a. Special emphasis will be given to modern methods of repair, shop equipment, and shop management. Winter and Spring quarters.

Daily 8:00 to 11:00.

Associate Professor Humpherys and Mr. Winchell

c. Automobile Electrical Course. Arranged for students who desire to become expert in ignition, storage battery repair, and acetylene welding. Much time will be spent in locating common troubles and making repairs. Winter and Spring quarters.

Daily, 2:00 to 5:00.

Associate Professor Humpherys and Mr. Winchell

d. A two weeks short course in tractors will be given during the winter quarter for tractor owners. Watch for further announcement or write for dates. *The Department*

JUNIOR COLLEGE COURSES

1. Farm Machinery. Tillage, cultivating, harvesting, pumping and general labor saving machinery. Two recitations and one laboratory period. Fall quarter. Three credits.

Lec. W. F. 1:00; lab. M. 2:00 to 5:00.

Associate Professor Humpherys

2. Farm Motors. The design, operation, care, and adjustment of gasoline engines used on the farm, including the stationary engine, the tractor, the automobile, and motor truck. Three recitations and two laboratory periods, one quarter. Five credits.

Lec. M. W. F. 1:00; Winter or Spring quarter.

Lab. Sec. 1, Men, T. Th. 2:00 to 5:00, Winter or Spring quarter.

Lab. Sec. 2, Women, M. W. 2:00 to 5:00, any quarter.

Associate Professor Humpherys and Mr. Winchell

SENIOR COLLEGE COURSES

3. Applied Farm Mechanics. Arranged for teachers in agriculture and men preparing to qualify in Smith-Hughes work. A study of modern machinery, farm motors, and farm appliances. Spring quarter. Five credits.

Lec. T. Th. S. 8:00; lab. T. Th. 2:00 to 5:00.

Associate Professor Humpherys

5. Advanced Farm Motors. A thoro analysis of ignition devices for all gas engines, the care of the storage battery, magnetos, locating engine troubles; a study of farm electric lighting. Spring quarter. Five credits.

Lec. M. W. F. 8:00; lab. M. W. 2:00 to 5:00.

Associate Professor Humpherys and Mr. Winchell

FINANCE AND BANKING

Professor Hendricks
Associate Professor Wallin

See Economics, Political Science, and Sociology for related work.

JUNIOR COLLEGE COURSES

6. Financial and Economic History of the United States. The principal events of our political life and their economic causation; the history of the tariff, money and banking, agriculture, manufacturing, etc. Fall and Winter quarters. Three credits each quarter.

T. Th. S. 9:00. *Associate Professor Wallin*

SENIOR COLLEGE COURSES

1. Money. A general survey of the laws and forms of money and credit; the money question; the money market; experience and legislation of recent times. Fall quarter. Three credits.

M. W. F. 9:00. *Professor Hendricks*

2. Banking. History and theory of banking in the United States and foreign countries, foreign exchanges. Three hours. Winter quarter. Three credits.

M. W. F. 9:00. *Professor Hendricks*

3. Public Finance. The principles of public expenditures, revenues, and administration. Fall quarter. Three credits.

(Not given in 1919-20).

4. Taxation. The methods of federal and state taxation, including the customs and internal revenue duties; income, business, inheritance, general property, and corpation taxes. Winter quarter. Three credits.

(Not given in 1919-20).

5. Corporation Finance. Corporate incomes, expenditures, debts, and administration; the laws governing the growth of corporations and their relation to the State. Spring quarter. Three credits. (Open to Junior College students upon permission by instructor).

M. W. F. 9:00. *Professor Hendricks*

7. Railway Transportation and Practice. The development of the railway system, railway finance, railway statistics; the theory of rates, methods of public control in Europe, Australia, and America. Three credits.

(Not given in 1919-20).

8. Industrial Efficiency. A study of modern business management, as an introduction to work in efficiency engineering.

(Not given in 1919-20).

9. Industrial Efficiency. A study of the executive and his work in the field of modern business. Spring quarter. Three credits.

M. W. F. 11:00. *Professor Hendricks*

FOODS AND DIETETICS

Professor Jessie Whitacre
Miss Ruby Beers

VOCATIONAL COURSES

a. Food for the Family. Nutritional, economical, and sanitary influences affecting choice of food; study of food to meet dietary needs of the normal family. Practice in food preparation. Two lectures and two laboratory periods per week. Fall, Winter, and Spring quarters. Three credits each quarter.

Lec. T. Th. 10:00; lab. T. Th. 2:00 to 5:00.

Professor Whitacre and Miss Beers

JUNIOR COLLEGE COURSES

2. Food Economics. General methods of food production, distribution, and preservation. Study of principles underlying choice of food and practice in technic of preparation and service of human food. Prerequisites, Chemistry 1, Zoology 1, Physics or Botany 1; Prerequisite or parallel, Physiology 1 and 2. Two lectures and two laboratories per week. Fall, Winter, and Spring quarters. Four credits each quarter.

Lec. T. Th. 12:00; lab. W. F. 2:00 to 5:00.

Professor Whitacre and Miss Beers

SENIOR COLLEGE COURSES

4. Dietetics. The principles of human nutrition. Human dietary needs; nutritive value of foods. Practice in construction of dietaries to meet given needs. Prerequisites, Chemistry 18 and 7, Bacteriology 2, and Foods 2. Three lectures and two laboratories per week. Winter and Spring quarters. Five credits each quarter.

Lec. M. W. F. 8:00; lab. T. Th. 2:00 to 5:00.

Professor Whitacre

3. Special Diets. Choice and preparation of food under conditions that present definite problems; as for infants and children, school lunches, and the sick. Laboratory practice in preparation of foods suitable to demands in given instances. Collateral reading. Prerequisite, Foods 4. Fall quarter. Three credits.

Lec. W. F. 8:00; lab. T. 2:00 to 5:00 *Professor Whitacre*

10. Special Problems. This course is in the nature of seminar work. Project to be planned with instructor and carried out under her supervision. Prerequisites, Foods 2 and Foods 4. Fall, Winter, and Spring quarters. Time and credit to be arranged with instructor in charge.

Professor Whitacre

GEOLOGY

Professor William Peterson

VOCATIONAL COURSES

a. Physiography. Special emphasis on the intermountain region. Winter quarter. Three credits.

M. W. F. 10:00. *Professor William Peterson*

JUNIOR COLLEGE COURSES

2. General Geology. Dynamic, structional, and historical geology. The changes the earth's surface is now undergoing and the forces which produce them as a means of interpreting the past. Laboratory study of the common rocks and rock-forming minerals, with special stress on the soil product resulting from rock disintegration. A careful study of the geological development of the North American continent. Field trips with written reports. Prerequisites, Chemistry 1, Zoology 2. Winter and Spring quarters. Five credits each quarter.

Daily except M. 9:00. *Professor William Peterson*

3. Economic Geology. The first part of the course will deal with the non-metals with special emphasis on mineral fertilizers; the second part, with metals, their origin and economic uses. Either quarter may be taken without the other. Prerequisite, Geology 2. Winter and Spring quarters. Three credits each quarter.

.M W.F. 1:00. *Professor William Peterson*

4. Mineralogy. Individual laboratory work in blow-pipe analysis and determinative mineralogy. Prerequisite, Chemistry 1. One recitation and two laboratory periods. Students may start any time. Credit in proportion to work.

Professor William Peterson

5. Geology of Ground Water. A study of structure to determine the cause of springs, artesian wells, etc. Structural characteristics that will yield water, either through tunneling or boring. Prerequisites, Geology 1 or 2, and Physics 1. Five hours. Winter quarter. Five credits.

Daily except M. 8:00. *Professor William Peterson*

SENIOR COLLEGE COURSES

6. Advanced Physiography. For students who wish a more complete knowledge of physiographic features and processes than can be given in Geology 1. Prerequisite, Geology 2. Fall quarter. Three credits.

(Not given in 1919-20.)

7. Petrology. The origin and formation of the different kinds of igneous rocks and methods for the determination of the minerals which compose them. Prerequisites, Geology 2 and 4. Chemistry 1. Lectures, reading, and laboratory work. Either quarter. Credit to be arranged.

(Not given in 1919-20.)

8. Field methods necessary in mapping the detailed geology of an assigned area. Time and credit to be arranged.

Professor William Peterson

9. Local Geology. The relief of Utah and bordering states. Relation of the country rock and physical features to productive land areas. One piece of relief modeling is required from each student. Prerequisite, Geology 2. Winter or Spring quarter. Three hours, two or three credits. Laboratory to be arranged.

Professor William Peterson

10. Geology. Relief modeling, methods by which any topographic map may be converted into a true relief model, including either the geology or detailed geography as the student may select. Either Fall or Winter quarter. Two or three credits.

Hours to be arranged. *Professor William Peterson*

11. Agricultural Geology. Local geology in the valleys of Utah. A detailed study will be made of the rock formations

surrounding each valley, and the character of soils from the disintegration of these rocks. The course will be prefaced by a study of structural and relief features of the State as well as a general survey of the drainage systems as they have influenced the disposition of disintegrated rock in the forming of soil. Three lectures per week. Winter quarter. Three credits.

M. W. F. 11:00. *Professor William Peterson*

HISTORY

Professor Daines
Assistant Professor Robinson

VOCATIONAL COURSES

a. History of Civilization. A study of the development of Western civilization to 1603. Intended to give vocational students a background to enable a clearer understanding of present-day problems. Should be followed by History b. Winter quarter. Three credits.

M. W. F. 12:00. *Assistant Professor Robinson*

b. History of Civilization. A continuation of History a. This course includes a study of the underlying causes of the War of 1914, and a discussion of post-war problems. Spring quarter. Three credits.

M. W. F. 12:00. *Assistant Professor Robinson*

d. The War of 1914. A detailed study of the events leading up to the War of 1914, with a discussion of the work of the Peace Conference.

(Not given in 1919-20.) *Assistant Professor Robinson*

JUNIOR COLLEGE COURSES

3a. English History. Political and social history of England to 1485. Fall quarter. Three credits.
T. Th. S. 10:00. *Assistant Professor Robinson*

3b. English History. Political and social history of England, 1485 to 1815. Winter quarter. Three credits.
T. Th. S. 10:00. *Assistant Professor Robinson*

3c. English History. Political and social history of the British Empire, 1815 to the present. Particular attention will be paid to Anglo-American relations and to England's part in the War of 1914. Spring quarter. Three credits.
T. Th. S. 10:00. *Assistant Professor Robinson*

4a. Modern European History. Political and social modern Europe to 1815. Three lectures per week. Fall quarter. Three credits.
T. Th. S. 9:00. *Professor Daines*

4b. Modern European History. A continuation of 4a to recent times. Three lectures per week. Winter quarter. Three credits.
T. Th. S. 9:00. *Professor Daines*

4c. Recent History. International relations of recent times and the World War. Three lectures per week. Spring quarter. Three credits.
T. Th. S. 9:00. *Professor Daines*

5a. Western United States History. The history of the Rocky Mountain and Pacific Coast regions, early period. Three lectures per week. Fall quarter. Three credits.
M. W. F. 2:00. *Professor Daines*

5b. Western United States History. A continuation of 5a. Special attention is paid to Utah history. Three lectures per week. Spring quarter. Three credits.

M. W. F. 2:00. *Professor Daines*

6a. Ancient History. A history of Greece and of earlier civilized states. Three lectures per week. Three credits.

(Not given in 1919-20.)

6b. Ancient History. History of Rome. Three lectures per week. Three credits.

(Not given in 1919-20.)

8. History of Agriculture. (Agronomy 14.) History of agriculture, with special emphasis on special and scientific phases; the successive steps by which modern agriculture has attained its present status. Two lectures. Winter quarter. Two credits.

Lec. T. Th. 10:00. *Associate Professor Stewart*

10. History of Art (Art 6). Winter quarter. Three credits.

M. W. F. 1:00. *Professor Powell*

11a. History of Domestic Architecture (Household Administration 11a.). Three lectures per week. Winter quarter. Three credits.

M. W. F. 10:00. *Professor Fletcher*

11b. History of Furniture (Household Adminisrtation 11b). History of interior decoration and furniture styles. Three lectures per week. Spring quarter. Three credits.

M. W. F. 10:00. *Professor Fletcher*

14a. History of Democracy. A study of the experiments in democratic government made at various times from that of

Greece to that of modern states. Three lectures per week. Winter quarter. Three credits.

M. W. F. 9:00. *Professor Daines*

14b. History of Democracy. A continuation of 14a. Three lectures per week. Spring quarter. Three credits.

M. W. F. 9:00. *Professor Daines*

SENIOR COLLEGE COURSES

12a. Constitutional History of the United States. A history of the origins and development of our fundamental laws and institutions, early period. Fall quarter. Three credits.

M. W. F. 11:00. *Professor Daines*

12b. Constitutional History of the United States. A continuation of 12a. Three lectures per week. Winter quarter. Three credits.

M. W. F. 11:00. *Professor Daines*

13a. United States History. History of the United States to 1830. The social and political aspects of our history is emphasized. Three lectures per week. Fall quarter.

(Not given in 1919-20.)

13b. United States History. A continuation of 13a. Winter quarter.

(Not given in 1919-20.)

15a. World Politics. A study of the principles and practices governing international relations of the leading world states. of the past and present. Two lectures per week. Fall quarter. Two credits.

M. W. 1:00. *Profesor Daines*

15b. World Politics. A continuation of 15a. Two lectures per week. Winter quarter. Two credits.
M. W. 1:00. *Professor Daines*

15c. World Politics. A continuation of 15b. Two lectures per week. Spring quarter. Two credits.
M. W. 1:00. *Professor Daines*

HORTICULTURE

Professor Merrill
Assistant Professor Abell
Mr. Emil Hansen

The following courses are required of all students majoring in Horticulture: 2, 4, 5, 8, 11, 12, 14, and 16.

VOCATIONAL COURSES

a. Fruit Growing in the West. A study of the principles and practices governing fruit production in arid regions. Two lectures and one laboratory period. Fall quarter. Three credits.
Lec. T. Th. 8:00; lab. M. 2:00 to 5:00. *Professor Merrill*

b. Practical Horticulture. Horticultural operations. Budding, grafting, pruning, spraying, plant propagation, greenhouse and nursery practice. Two lectures and one laboratory period. Winter quarter. Three credits.
Lec. T. Th. 8:00; lab. M. 2:00 to 5:00.
Assistant Professor Abell and Mr. Hansen

c. The Principles of Gardening. Planning, planting, and care of gardens. Study of varieties and garden operations. Production emphasized. Two lectures and one laboratory period. Spring quarter. Three credits.
Lec. T. Th. 8:00; lab. M. 2:00 to 5:00.
Assistant Professor Abell

JUNIOR COLLEGE COURSES

1a, 1b, 1c. Priciples of Horticulture. This is a course in general horticulture of Junior College grade designed especially for agricultural students not specializing in horticulture, but who desire to become acquainted with the general field of horticultural information and practice. Fall, Winter, and Spring quarters, but each quarter's work is complete and may be taken separate. Prerequisite Botany 2. Two lectures and one laboratory period. Three credits, each quarter.

Fall quarter (1a) Orchard and Small Fruits.
Lec. T. Th. 10:00; lab. F. 2:00 to 5:00. *Professor Merrill*

Winter quarter (1b) Horticultural Technic.
Lec. T. Th. 10:00; lab. F. 2:00 to 5:00.
Professor Merrill and Mr. Hansen

Spring quarter (1c) Vegetable and Landscape Gardening. This course is also planned to meet the needs of Home Economics students.
Lec. T. Th. 10:00; lab. F. 2:00 to 5:00.
Assistant Professor Abell and Mr. Hansen

2. Pomology. Principles underlying home and commercial fruit growing. Three lectures. Fall quarter. Three credits.
M. W. F. 12:00. *Professor Merrill*

3. Plant Propagation. Methods in horticultural technic. Studies in budding, grafting, reproduction by seeds and vegetative parts, and nursery practice. Prerequisite, Botany 1 or 2. One lecture and two laboratory periods. Winter quarter. Three credits.
Lec. F. 11:00; lab. W. F. 2:00 to 5:00.
Assistant Professor Abell

4. Practical Pomology. Practical problems pertaining to orchard practice—pruning, frost injury and prevention, planting, spraying, thinning, fertilizing, and growth of cover crops. Prerequisite, Horticulture 2. One lecture and two laboratory periods. Spring quarter. Three credits.

Lec. F. 10:00; lab. T. Th. 2:00 to 5:00.

Assistant Professor Abell

5. Olericulture. Principles and practices underlying production of vegetable crops, and methods of handling for home and commercial purposes. Study of varieties and their adaptations. Two lectures and one laboratory period. Fall quarter. Three credits.

Lec. T. Th. 9:00; lab. M. 2:00 to 5:00.

Assistant Professor Abell

6. Plants Under Glass. Vegetable forcing. Crops grown in cold frames, hot-beds, and greenhouses. Soil composting and managing. Prerequisite, Horticulture 5. One lecture and two laboratory periods. Winter quarter. Three credits.

Lec. M. 12:00; lab. T. Th. 2:00 to 5:00.

Assistant Professor Abell

7. Small Fruits. Propagating, cultivating, pruning, harvesting, and marketing of berries, currants, and grapes. History and characteristics of varieties. Two lectures and one laboratory period. Spring quarter. Three credits.

Lec. T. Th. 9:00; lab. M. 2:00 to 5:00.

Professor Merrill

8. Landscape Gardening. Principles underlying home and city beautification. Preparation of ground, selection and grouping of ornamental plants, care of lawns, designing of plans. Prerequisite, Botany 2. Two lectures and one laboratory period. Fall quarter. Three credits.

Lec. M. W. 11:00; lab. W. 2:00 to 5:00.

Assistant Professor Abell and Mr. Hansen

SENIOR COLLEGE COURSES

1. General Horticulture. Study of the various phases of horticulture from the viewpoint of correlation with general or specialized farming. Intended primarily for Senior College agricultural students not specializing in horticulture. Three lectures and two laboratory periods. Spring quarter. Five credits.

Lec. M. W. F. 12:00; lab. T. Th. 2:00 to 5:00.

Professor Merrill

9. Landscape Design. Advanced practice in landscape art. Prerequisite, Horticulture 8. One lecture and two laboratory periods. Winter quarter. Three credits.

(Not given in 1919-20).

10. Home Floriculture. Propagation and care of plants useful for home decoration. Exterior plantings, flower beds, and borders. Designed for students in Home Economics as well as for horticultural students. Two lectures and one laboratory period. Spring quarter. Three credits.

Lec. M. W. 10:00; lab. W. 2:00 to 5:00.

Assistant Professor Abell and Mr. Hansen

11. Systematic Pomology. Variety characteristics and adaptations. Fruit scoring and preparation for judging fruit exhibits. Prerequisites, Horticulture 2 and 4. One lecture and two laboratory periods. Fall quarter. Three credits.

Lec. F. 11:00; lab. T. Th. 2:00 to 5:00. *Professor Merrill*

12. Plant Breeding. Fundamentals of Mendelism, genetics, and biometry. Study of hereditary characters, environmental variations, and practical plant breeding work. Prerequisites, Horticulture 3 and Botany 2. Three lectures and two laboratory periods. Spring quarter. Five credits.

Lec. M. W. F. 11:00; lab. W. F. 2:00 to 5:00.

Professor Merrill

13. Horticultural By-Products. Utilization of waste materials. Biochemistry of processes in plant products. Ripening, storage, decay, fermentation, canning operations. Prerequisites, Horticulture 2, 5, and 7, Botany 4, Chemistry 3, and Bacteriology 1. Two lectures and two laboratory periods. Fall quarter. Four credits.

(Not given in 1919-20).

14. History of Cultivated Plants. Historical consideration of wild plants in nature from earliest times and their gradual adaptation to the uses of man. Two lectures. Winter quarter. Two credits.

M. W. 11:00. *Professor Merrill*

15. Experimental Horticulture. Preparation for research in horticulture. History and tendencies of horticultural research throughout the world. Critical study of bulletins, theses, and research publications. Extensive reading and reports. Reading knowledge of French and German desirable. Prerequisites, Horticulture 2, 3, 4, 5, 6, 7, 11 and 12, Botany 2 and 4. Chemistry 3, and Entomology 1. Five credits. Spring quarter.

Hours to be arranged.

Professor Merrill and Assistant Professor Abell

16. Seminar. Review of current literature. For advanced students. One hour a week each quarter. One credit each quarter.

Time to be arranged.

Professor Merrill and Assistant Professor Abell

17. Research. For students with adequate preparation. Time and credit to be arranged.

Professor Merrill and Assistant Professor Abell

HOUSEHOLD ADMINISTRATION

Professor Calvin Fletcher
Professor N. A. Pedersen
Professor P. E. Peterson
Professor R. O. Porter
Assistant Professor Amy L. Merrill
Miss Ruby Beers

Students doing their major work in Household Administration must include at least 21 hours of Senior College work in this department.

JUNIOR COLLEGE COURSES

2. Home Nursing. Scope of home nursing; treatment of common ailments. Care of the sick. Use of drugs and patent medicines. Three lectures per week. Fall quarter. Three credits.

M. W. F. 10:00. *Professor Porter*

11a. History of Domestic Architecture. (History 11a.) History of the house from primitive times to the present. Three lectures per week. Winter quarter. Three credits.
M. W. F. 10:00. *Professor Fletcher*
11b. History of Furniture. (History 11b.) History of interior decoration and furniture styles. Three lectures per week. Spring quarter. Three credits.
M. W. F. 10:00. *Professor Fletcher*

SENIOR COLLEGE COURSES

20. Household Administration. The organization and control of the home. The economic relations in the household, application of scientific principles to its problems. Scheduling of

routine work in the home, emphasizing the economic, sanitary, and aesthetic principles involved in the purchase, preparation, preservation, and serving of food. Prerequisites, Economics 1, Foods 2, Textiles 1a and 1b. Fall and Winter quarters. Three credits per quarter. Two lectures and one laboratory, Fall quarter; three lectures, Winter quarter.

Lec. W. F. 9:00; lab. M. 2:00 to 5:00, Fall quarter.

Lec. M. W. F. 9:00, Winter quarter. *Miss Beers*

21. Household Budget. A study of family income, and its equivalent in productive labor within the household. Family expenditures and their regulation. The budget as a measure of standards of living. Prerequisites, Household Administration 20 and 27. Three lectures. Spring quarter. Three credits.

M. W. F. 10:00. *Miss Beers*

22a. House Furnishing. (Art 22a). House furnishing and decoration. Consideration of the principles governing good taste in house exteriors and garden designs, wall decoration, floors, ceilings, color, and furniture selection and arrangements. Prerequisites, Art 1, 21, 2, or their equivalents. Three lecture periods and one laboratory per week. Fall quarter. Four credits.

Lec. M. W. F. 1:00; lab. F. 2:00 to 5:00. *Professor Fletcher*

22b. Home Furnishing. (Art 22b). Textiles and drapery, tableware, pottery, and bric-a-brac, pictures, sculpture, flowers, will be treated upon together with the assembling of all features which go to make the home beautiful. Prerequisite, Household Administration 22a. Three lecture periods and one laboratory per week. Winter quarter. Four credits.

Lec. M. W. F. 1:00; lab. F. 2:00 to 5:00. *Professor Fletcher*

23. Practice Housekeeping. Residence for six weeks in the Practice Home of the College. Opportunity is given to apply to home conditions the principles of home economics as

studied in the college. Fee $5.00 per week. Three credits for the course.

Assistant Professor Merrill

25. Mothercraft and Child Welfare. Growth and development of the foetus, correct and incorrect impressions concerning the prenatal influence, physiological changes during pregnancy, care of the expectant mother, care of the infant, causes and prevention of infant mortality, and vital questions of the adolescent period will be considered. Three lectures per week. Spring quarter. Three credits.

M. W. F. 9:00. *Professor Porter*

27. Household Accounts. (Accounting 7). The practical application of accounting principles to home problems. Two lectures and six hours laboratory work per week. Winter quarter. Four credits.

Lec. T. Th. 12:00. *Professor P. E. Peterson*

30. Literature for Children. Study of the child and institutional factors affecting him; the child and the book; the adolescent and the book; types of literature for children; contributions to children's literature of Greece, Rome and other countries. Two lectures per week. Spring quarter. Two credits.

T. Th. 1:00. *Professor N. A. Pedersen*

IRRIGATION AND DRAINAGE

Associate Professor Israelsen
Professor Ray B. West
Mr. Fife

Students who major in Irrigation and Drainage will be required to complete courses 1, 2, 4, and 6 or their equivalents, and to present a thesis concerning some special problem to be assigned by the Department.

VOCATIONAL COURSES

a. Farmers' Course in Irrigation and Drainage. Practical information on measurement of irrigation water, construction of small headgates and ditches, methods of handling irrigation water on different types of soil, and common problems in farm drainage. Winter quarter. Three credits.

M. W. F. 8:00. *Associate Professor Israelsen and Mr. Fife*

b. Water Masters' Short Course. Practical information in condensed form concerning water measurement, capacities of different soils to absorb and retain water, irrigation of porous upland soils, water requirement of crops, preparation of land for irrigation, boring wells and installation of pumps for irrigation purposes, water right doctrines, and other equally important irrigation problems.

Two weeks beginning Feb. 9 and ending Feb. 21.

Associate Professor Israelson, Mr. Fife, and others

JUNIOR COLLEGE COURSES

1. Irrigation and Drainage Practice. (Agronomy 10). Water measurement, effect of soil and plant on time and frequency of irrigation, duty of water, design of farm ditches and preparation of land for irrigation, pumping for irrigation, and methods of farm drainage. Designed especially for students in agriculture. This course may be applied as major or minor in the Department of Agronomy. Sec. 1, Fall quarter; Sec. 2, Spring quarter. Five credits.

Lec. M. W. F. 8:00; lab. T. Th. 2:00 to 5:00.

Associate Professor Israelsen and Mr. Fife

2. Hydraulics. Laws of liquids in motion and at rest, flow in natural and artificial channels, and elementary principles of water power development. Prerequisite, Mathematics 2 or its equivalent. Winter quarter. Five credits.

Daily, except Saturday, 9:00. *Associate Professor Israelsen*

SENIOR COLLEGE COURSES

3. Design of Drainage Systems. Preliminary survey, location of drains, flow in drains and in open channels, and construction of drainage systems with special reference to the drainage of irrigated lands. Prerequisite, Hydraulics. Spring quarter. Five credits.

Lec. T. Th. S. 8:00; lab. T. Th. 2:00 to 5:00.

Associate Professor Israelsen

4. Design of Irrigation Systems. Sources of water supply, diversion works, canal alignment and cross section, flumes, drops, and spillways. Prerequisites, Hydraulics, and Strength of Materials. Fall and Spring quarters. Five credits each quarter.

Lec. M. W. F. 11:00; lab. M. W. 2:00 to 5:00.

Associate Professor Israelsen

5. Management and Operation of Irrigation Systems. Delivery of water to irrigators, annual water charges, operation costs. Fall quarter. Three credits.

M. W. F. 12:00. *Associate Professor Israelsen*

6. Irrigation Institutions. Water right doctrines, laws governing the adjudication and acquirement of water rights and the distribution of water, organization of irrigation enterprises. Prerequisite or parallel, a general course in Economics or Sociology. Winter quarter. Three credits.

T. Th. S. 8:00. *Associate Professor Israelsen*

7. Seminar. Papers and discussions upon problems concerning some phase of irrigation or drainage development. Required of students who major in irrigation and drainage. One period. Winter quarter. One credit. Hour to be arranged with instructor.

Associate Professor Israelsen and Professor West

8. Research. Seniors who major in irrigation and drainage may elect special problems for investigation. Hours and credits to be arranged with instructor.

Associate Professor Israelsen and Professor West

Note.—Agronomy 6 (Soils) may be applied as major or minor in the Department of Irrigation and Drainage, School of Agricultural Engineering.

LIBRARY ECONOMY

Miss Hattie Smith

1. General Reference. Classification and arrangement of books; the card catalog; reference books. Text, "List of Reference Books in the Utah Agricultural Colege Library." One lecture, Fall Winter, and Spring quarters. One credit each quarter.

F. 1:00. *Miss Smith*

2. Bibliography. Agricultural, scientific, and technical literature of learned societies, special periodicals, and government publications. Lectures by professors; each student compiles a bibliography. One hour, Fall, Winter, and Spring quarters. Three credits.

(Not given in 1919-20).

MARKETING

Associate Professor Wallin

SENIOR COLLEGE COURSES

1. Agricultural Commerce. This course will cover the basic facts necessary to the clear understanding of the problems in marketing. Supply and demand of farm products, prices and

production, the economics relations of the farmer, the middleman, and the consumer will receive special consideration. Prerequisite, Economics 1 or 2. Three lectures per week. Fall quarter. Three credits.

M. W. F. 9:00. *Associate Professor Wallin*

JUNIOR COLLEGE COURSES

2. Marketing of Farm Products. Problems of marketing specific farm products, such as livestock, grains, potatoes, hay, dairy products and poultry products, etc., will be considered from the standpoint of the economic forces which give rise to such problems. Possibilities of improvement of the present systems will be considered. Prerequisite, Economics 1 or 2. Three lectures per week. Winter quarter. Three credits.

M. W. F. 9:00. *Associate Professor Wallin*

3. Cooperation in Agriculture. Growth of the cooperative movements with the viewpoint of showing their strength and weakness. Typical cooperative enterprises will be studied in detail. Principles of cooperation and the practicability of their application will receive first consideration. Prerequisite, Economics 1 and 2. Three lectures per week. Spring quarter. Three credits.

M. W. F. 9:00 *Associate Professor Wallin*

MATHEMATICS

Professor Saxer
Mr. Edlefsen

VOCATIONAL COURSES

a. Vocational Algebra. A brief course in elementary algebra. Daily for twelve weeks during the Summer quarter.

b. Plane Geometry. Fall and Winter quarters. Five credits each quarter.

Daily, except Monday, 9:00. *Mr. Edlefsen*

w. Arithmetic. Applied or vocational arithmetic for winter course students. Winter quarter. Three credits.
M. W. F. 1:00. *Professor Saxer*

JUNIOR COLLEGE COURSES

2. Elementary Analysis. Elementary graphical methods for presenting facts. Elementary theory of statistics. Relation of the graph to arithmetic, algebra, and geometry. Graphical and algebraical solution of triangles. Trigonometry and the use of trigonometric tables. Use of logarithms, slide rule, etc. Prerequisites, one year of algebra and geometry. Three lectures per week. Fall, Winter, and Spring quarters. Three credits each quarter.
M. W. F. 11:00. *Professor Saxer*

4. Solid Geometry. Spring quarter. Five credits.
Daily, except Monday 9:00. *Mr. Edlefsen*

5. College Algebra. Fall quarter. Five credits.
Daily, except Saturday, 10:00. *Mr. Edlefsen*

6. Trigonometry. Winter quarter. Prerequisite, Mathematics 5. Five credits.
Daily, except Saturday, 10:00. *Mr. Edlefsen*

SENIOR COLLEGE COURSES

7a. Analtyic Geometry. Fall quarter. Five credits. Prerequisite, Mathematics 6.
Daily, except Monday 8:00. *Professor Saxer*

7b. Differential Calculus. Winter quarter. Five credits. Prerequisite, Mathematics 7a.
Daily, except Monday 8:00. *Professor Saxer*

7c. Integral Calculus. Spring quarter. Five credits. Prerequisite, Mathematics, 7b.
Daily, except Monday 8:00. *Professor Saxer*

8. Differential Equations. Prerequisite, Mathematics 7. Fall, Winter, and Spring quarters. Two credits each quarter. T. Th. 1:00. *Professor Saxer*

10. General Astronomy. Prerequisites, Physics 1 and Mathematics 2 or 6. Spring quarter. Five credits. Daily, except Saturday 10:00. *Professor Saxer*

12. Mathematical Theory of Investment. Prerequisite, Mathematics 2 or 5. Spring quarter. Five credits. Daily, 10:00. (Not given in 1919-20).

MECHANIC ARTS

Professor R. B. West
Professor J. S. Powell
Associate Professor Hansen
Associate Professor Newey
Assistant Professor Pulley*
Mr. Swenson
Mr. A. H. Powell

A deposit of $3.00 is required for each shop course.

FORGING AND GENERAL BLACKSMITHING

Associate Professor Newey

VOCATIONAL COURSES

a, b, c. Forge Practice. Forging, welding, tempering, tool making, and other operations essential to forge shop work. Sec. 1, 8:00 to 10:00 daily each quarter. Four credits. Sec. 2, 2:00 to 5:00 daily except Saturday, each quarter. Five credits. *Associate Professor Newey*

*On leave of absence.

e. Short Course. Select work from Forge Practice a, for agricultural students who cannot spend each day in the shops. Nine hours a week, each quarter. Three credits.

With the exception of the demonstration periods the schedule for this course may be irregular.

Demonstration periods. Sec. 1, T. 8:00 to 10:00.

Sec. 2, T. 2:00 to 5:00.

Sec. 3, W. 8:00 to 10:00.

Sec. 4, W. 2:00 to 5:00.

Associate Professor Newey

f. Forge Practice. For students taking automobile and tractor course. Each quarter. Two credits a quarter.

M. W. F. 10:00 to 12:00. *Associate Professor Newey*

JUNIOR COLLEGE COURSES

1, 2, 3. Forge Shop Operations. Advanced forging and general repair work, including plow work, spring work, axle and tire setting, and horseshoeing. Prerequisite, Forge Practice.

Sec. 1, 8:00 to 10:00, daily, each quarter, four credits.

Sec. 2, 2:00 to 5:00 daily except Saturday, each quarter. Five credits. *Associate Professor Newey*

4, 5, 6. Advanced Shop Practice. In this course the student may emphasize any line of blacksmith work that suits his particular needs. Prerequisite, Forge Shop Operations. Credit also in Senior course.

Sec. 1, 8:00 to 10:00, daily each quarter. Four credits.

Sec. 2, 2:00 to 5:00 daily except Saturday, each quarter. Five credits. *Associate Professor Newey*

7, 8, 9. Automobile Repairs. The work consists of repairing and building bodies, wheels, and springs. Prerequisite, Forge Shop Operations.

Sec. 1, 8:00 to 10:00 daily each quarter. Five credits.

Sec. 2, 2:00 to 5:00 daily except Saturday, each quarter. Five credits. *Associate Professor Newey*

FOUNDRY. Operated for demonstration and the making of castings. If a sufficient number of students apply, the foundry will run for instructional purposes also.

MACHINE AND AUTOMOBILE WORK

ASSISTANT PROFESSOR PULLEY*
MR. A. H. POWELL

In the following courses a study will be made of the tools, methods, and materials used in the construction, care, and repair of machinery. Problems relating to the work, as the speed of pulleys, gears, drills, etc., will be required. The exercises are chosen with reference to their practical application.

VOCATIONAL COURSES

c. SHORT COURSE. Exercise selected from courses 1, 2, and 3. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 2:00 to 5:00.

d. ADVANCED SHORT COURSE. Work selected from courses 3, 4, and 5. Two credits each quarter.

T. Th. 2:00 to 5:00.

f. CARE OF FARM MACHINERY. A course for those who have farm machinery to care for. Exercise in chipping, filing, drilling, babbiting, soldering, scraping, etc., constitute the course. Four credits.

Daily, 8:00 to 10:00.

t. MACHINE PRACTICE. For those taking their first course in auto and tractor work. Exercises selected from courses 1 and 2. Three days per week from 10:00 to 12:00. Two credits.

*On leave of absence.

JUNIOR COLLEGE COURSES

1. Bench Work. Filing, chipping, drilling, fitting, grinding, tap and die work. Five credits.
Daily 2:00 to 5:00.

2. Bench, Planer, and Shaper Work. Soldering, babbiting, and scraping bearings, elementary planer and shaper work, squaring, keys, and keyways. Five credits.
Daily 2:00 to 5:00.

3. Advanced Planer, Shaper, and Lathe Work. Planing and shaping of angular and irregular surfaces. Elementary turning. Five credits.
Daily, 2:00 to 5:00.

4. Lathe Work (Continued). Mandrel and chuck work. Angular facing and boring. Five credits.
Daily, 2:00 to 5:00.

5. Advanced Lathe Work and Millling Machine. Thread cutting and fitting, making of drive and running fits, bolts, screws, and repair parts. Five credits.
Daily 2:00 to 5:00.

6. Lathe and Milling Machine Work (Continued). Spur gears, bevel gears, face plate work, couplings, etc. Five credits.
Daily 2:00 to 5:00.

SENIOR COLLEGE COURSES

7, 8, 9. Lathe, Milling, and Grinding Machine. Involving operations connected with the making of simple tools and machine parts. Five credits per course.
Daily 2:00 to 5:00.

10, 11, 12. Simple Machine Construction. Model engines, jigs, and fixtures, manufacturing. Five credits per course. Daily 2:00 to 5:00.

13. Materials of Machines. Time and credits to be arranged.

14. Mechanism. Time and credits to be arranged.

MECHANICAL DRAWING

Professor J. S. Powell
Professor Ray B. West
Mr.————

Drawing rooms are open daily from 9:00 to 12:00. Three hours' work a week are required for each credit.

JUNIOR COLLEGE COURSES

1. Agricultural Drawing.

1a. Farm Construction. Working drawings of feed racks, gates, etc., in straight line projection. Lettering and reading of plans. Fall or Winter quarter. Two credits.

1b. Farm Structures. Drawing and designing of poultry houses, swine houses, granaries, garages, and other farm buildings. Prerequisite 1a. Winter or Spring quarters. Two credits.

1c. Maps and Topographical Drawing. Drawing of grounds, gardens, and farm maps. Prerequisite 1b. Spring quarter. Two credits.

Professor Powell and Mr. ————

For advanced farm structures see Rural Architecture 8.

2. Drawing for Builders and Mechanics.

These courses are planned to correlate with the work of the student in the shops.

2a. Drawing of Shop Exercises. Freehand sketching

and rendering in straight line projection. Reading of plans, and lettering. Fall or Winter quarter. Two credits.

2b. Structural Details. Drawing of walls, windows, roof details, and furniture. Forging exercises and machine parts. Prerequisite 2a. Winter or Spring quarter. Two credits.

2c. Building Details. Drawing of simple plans, elevations, and details. Problems in carriage and automobile bodies, and machine parts. Spring quarter. Two credits.

Professor Powell and Mr. ———

3. Mechanical Drawing.

3a. The Use of and Care of Instruments. Applied geometry, and orthographic projection. Fall or Winter quarter quarter. Three credits.

3b. Developing Surfaces and Intersections. Prerequisite 3a. Winter or Spring quarter. Three credits.

3c. Technical Sketching. Pictorial representations and perspectives. Prerequisite 3b. Spring quarter.

Professor Powell

4. Architectural Drawing. Prerequisite, Mechanical Drawing 3a, 3b, and 3c.

4a. Drawing of plans, elevations, etc. Any quarter. Three credits.

4b. Drawings of plans, elevations, sections and details. Prerequisite, Mechanical Drawing 4a. Any quarter. Three credits.

4c. Drawings of plans for grounds, gardens, and out-buildings. Prerequisite, Mechanical Drawing 4b. Any quarter. Three credits.

Professor Powell and Mr. ———

For Architectural Composition, see Rural Architecture 10 and 11.

Architectural Drawing may be used as a major or minor in Rural Architecture.

5. Engineering Drawing. The drawing of engineering structures in orthographic projection. Prerequisite, Drawing 1, 2, or 3. Any quarter. Three credits.

Professor West

6. Lettering and Designing of Commercial and Other Forms. Freehand sketching and lettering, making of graphical charts, and plotting of data. Designing accounting organizations and statistical forms. Three hours in Drawing for 1 credit. Student may elect one or more credits, any quarter.

Professor Powell and Mr. ————

7. Descriptive Geometry. Of practical value to the mechanic and engineer in reading working drawings and in solving graphical problems. The point, line, plane, and simple solid is studied. Prerequisite, Drawing 1, 2, or 4.

Professor West

TECHNOLOGY AND MECHANIC ARTS

Professor Ray B. West
Associate Professor Hansen
Associate Professor Newey
Assistant Professor Pulley*
Mr. A. H. Powell

JUNIOR COLEGE COURSES

1. A Survey of the Trades. History and development; methods of learning a trade; apprenticeship and trade school; problems of industrial development and factory life. Fall quarter. Two credits.

Hours to be arranged. *Professor Newey*

*On leave of absence.

2. Mechanism. (Machine and Automobile Work 14). The transmission of motion by links, levers, cams, belts, chains, and gears. Practical applications to machines and automobiles. Prerequisite, Mechanical Drawing a or Geometry.

Hours to be arranged. *Mr. A. H. Powell*

4. Wood Finishing (Woodwork 14). Paints, pigments, oils, and their manufacture. Water, oil, and spirit stains; wash finish. Varnish—kinds and their preparation; rubbing and hand polish. Three lectures a week, one quarter. Three credits. May be taken any quarter if four or more students apply.

Hours to be arranged. *Associate Professor Hansen*

SENIOR COLLEGE COURSES

5. House Building and Contracting. (Rural Architecture 9). Methods of construction; the frame, two-brick, three-brick, stucco, shingle, cement block, and stuccoed hollow tile; comparative cost and economy of each; interior finishing. Five hours.

Hours to be arranged. *Professor West*

6. Shop Problems. The application of mathematics to the trades; practical methods of estimating quantities of material, calculating costs, and finding speeds of machines; the use of geometry in the trades. Fall or Winter quarter. Five credits.

Hours to be arranged. *Associate Professor Newey*

7. Materials of Construction. (Rural Architecture 3). The chemistry of iron, steel, alloys, etc., and their special use in machine parts; strength, composition, and proper use of woods, plaster, glass, glue, paints, cement, brick, etc., in building. Five hours. Fall quarter. Five credits.

Daily, except Monday 10:00. *Professor West*

8. Aviation. A course dealing with the airplane, air-plane engines, and aviation practice. Spring quarter. Five credits.

WOODWORK AND HOUSEBUILDING

Associate Professor Hansen
Mr. Swenson
Mr. Hughes

The shops are open daily from 8:00 to 12:00 and from 2:00 to 5:00. The courses scheduled may be taken at any time when the shops are open.

a, b, c. Fundamentals. Scarfing, mortising, dovetailing, and jointing; panels, sashes, doors, and cupboards. Thoro practice in tool sharpening and proper handling of tools are emphasized. Three hours any three days a week. Fall, Winter, and Spring quarters. Five credits each quarter.

Associate Professor Hansen

d. Farm Carpentry. This course consists of making simple articles used on the farm such as nail boxes, troughs, feed hoppers, trestles, gates, grindstone frames, beehives, etc.; also rafter cutting and tool sharpening. Nine hours a week. May be had any quarter. May also be completed in two weeks, by working all day. Three credits.

Associate Professor Hansen

e. Short Course for Beginners. For students who cannot spend every day in the shops. Nine hours a week, any quarter. Three credits.

Associate Professor Hansen

JUNIOR COLLEGE COURSES

1, 2, 3. Machine Work. The use of wood-working machinery, building a modern work bench and tool chest; also elementary and advanced wood turning. Prerequisite, Car-

pentry c. Three hours daily and 5 days a week. Fall, Winter, and Spring quarters. Five credits each quarter.

Mr. Swenson

4, 5, 6. Cabinet Making and Housebuilding. Furniture in fir and oak, staining, fuming and finishing; framing, roofing, door and window frames. Prerequisite, Carpentry 3. Three hours any five days of the week. Fall, Winter, and Spring quarters. Five credits each quarter.

Mr. Swenson

SENIOR COLLEGE COURSES

7, 8, 9. Fancy Furniture. Mahogany and other expensive woods are used; veneering, inlaying, and hand polishing. Prerequisite Carpentry 6. Three hours daily, any five days of the week. Fall, Winter, and Spring quarters. Five credits each quarter.

Mr. Swenson

10. Wood Carving. Simple articles in straight and curved lines, simple conventional ornaments, and natural foliage. Time and credits to be arranged with the instructor.

Mr. Hughes

11. Pattern Making. Time and credits to be arranged with the instructor.

Mr. Swenson

12. Advanced Short Course. For students who have had some work and want to continue without taking the regular courses. Time and credit to be arranged with the instructor in charge.

Mr. Swenson

13. Picture Framing. Making of simple mouldings and

frames, finishing, mat cutting, mounting and fitting. May be had in connection with the advanced courses in woodwork. Time and credit to be arranged with the instructor.

Mr. Swenson

14. Wood Finishing. (Technology of Mechanic Arts 4). Paints, pigments, oils, and their manufacture. Water, oil, and spirit stains; wash finish. Varnish,—kinds and their preparation; rubbing and hand polish. May be taken any quarter if four or more students apply. Three lectures a week, one quarter. Three credits.

Time to be arranged with the instructor.

Associate Professor Hansen

METHODS IN EXPERIMENTATION AND EXTENSION

METHODS IN EXTENSION

These courses will be given by members of the Extension Division Staff. Hours and credits are to be arranged.

AGRICULTURAL SECTION

The purpose of the course in extension methods is to acquaint the advanced students, who may contemplate entering such activities, with the rapdily growing work of the Extension Division. The course, furthermore, is designed to act as a fitting school for practically trained agriculturists who plan to enter Extension work but whose knowledge is not organized according to college standards. The course will act as a cementing force among Extension workers themselves in that it will effect on their part a careful arrangement of their material and a careful comparison of their work with related work in the Extension Division. It will be planned to have the lecture material, in connection with the various subjects, given during different weeks and the demonstrations of certain different subjects grouped dur-

ing a few weeks in order to enable County Agents and others to take advantage of them.

1a. Methods in Extension. Lectures and demonstrations in the methods of instruction in agricultural extension work. Two lectures a week, Fall, Winter, and Spring quarters.

HOME ECONOMICS SECTION

The ever-increasing need for workers in the Extension field makes imperative a more intensive training in Extension methods than is obtained in a Home Economics course. The work offered in this course is designed to cover the activities that come within the range of the home and particularly those of the farm home, as well as to fit the field worker to handle with ease the various phases of Extension work. Students desiring recommendations for Extension work in this or other States should take this course.

Actual experience work in Home Economics, general study of phases of Extension work, program making, preparation of talks, preparing demonstrations and exhibits, project making, reports, are all included.

1b. Methods in Extension. Lectures and demonstrations in the methods of instruction in home economics extension work. Two lectures a week, Fall, Winter, and Spring quarters.

CLUB WORK SECTION

3. Methods in Extension.

The object of this course is to develop local leadership among the young people of the state. It may be taken by senior high schol students and others qualified to do the work. The work consists of acting as local leader for a group of at least five boys or five girls who are members of a club and are working on a project outlined by the Junior Extension Department. The local leader spends at least three hours each week with the

boys or girls in helping them with their work and in giving instruction and encouragement. Monthly reports and a final report of their work must be sent to the Junior Extension Department. The work will require six months to complete.

College credit will be given to those who do satisfactory work.

METHODS IN EXPERIMENTATION

This course will be given by members of the Experiment Station Staff. Hours and credits are to be arranged.

2. Methods in Experimentation.

a. Methods and principles of research as applied to agriculture. Winter term.

b. Experimental work in home problems in bacteriology, infant feeding, household chemistry or working out of home equipments, or in any problems brought in from the field.

Care will be taken not to duplicate other courses and an effort will be made to utilize in actual practice material obtained in class-room and laboratories.

MILITARY SCIENCE AND TACTICS

Russell Peter Hartle, Lieutenant Colonel, Infantry, U. S. A., Professor.

Robert N. Campbell, Major Coast Artillery, U. S. A., Assistant Professor.

Walter Throckmorton Scott, First Lieutenant, U. S. A., Assistant Professor.

James McGrath, Sergeant (retired), U. S. A., Assistant

The object of the military work at the College is to train men to become reserve officers in the army. An Infantry Unit, Senior Division, of the Reserve Officers' Training Corps, was established at the College in 1906. In all probability, Coast

Artillery and Motor Transportation Units will be established this fall. Course work in these units will cover the full four years of the college course. Of these, the first two are required and the second two optional.

The following articles of uniform are furnished by the War Department to all men in the Reserve Officers' Training Corps:

1 coat, wool, olive drab	1 overcoat
1 pair breeches wool, olive drab	1 hat
1 pair shoes, russet	1 hat cord
1 shirt, wool	2 collar ornaments
1 pair leggins	1 belt

Chevrons as required.

Men who sign an agreement to pursue the advanced course during their Junior and Senior years and to attend summer camps where such are required, receive twelve dollars each month as commutation of rations, and transportation, rations, and the pay of a private while attending the camp.

Upon satisfactory completion of the Advanced Course, and upon receipt, from his commanding officer of a certificate, setting forth his proficiency, the candidate, if he so desires, may make application to the War Department for a commission in the Officers' Reserve Corps.

MODERN LANGUAGES AND LATIN

PROFESSOR ARNOLD

JUNIOR COLLEGE COURSES

FRENCH

1. FIRST YEAR FRENCH. Walther and Ballard's Beginner's French for grammar and conversation. About 400 pages of easy prose are read. Three hours, Fall, Winter, and Spring quarters. Three credits each quarter.

Sec. 1, M. W. F. 10:00; Sec. 2, M. W. F. 1:00.

Professor Arnold

GERMAN

1. First Year German. Grammar, reading, and conversation. Three hours, Fall, Winter, and Spring quarters. Three credits each quarter.

T. Th. S. 8:00. *Professor Arnold*

SENIOR COLLEGE COURSES

FRENCH

2. Second Year French. Francois French Composition for grammatical review and writing in French; Lavisse's Histoire de France for conversation; translating works of nineteenth century authors. Prerequisite, French 1. Three hours, Fall, Winter, and Spring quarters. Three credits each quarter.

T. Th. S. 10:00. *Professor Arnold*

3. Advanced French. Reading course in Moliere's Plays. This course may be taken privately in the form of weekly reports. Prerequisite, two years of French. One hour a week, Fall, Winter, and Spring quarters. One credit each quarter.

T. 1:00. *Professor Arnold*

4. Advanced French. French conversation. Games, dictation, and learning of a one-act play. One hour a week, Fall, Winter, and Spring quarters. One credit each quarter.

Th. 1:00. *Professor Arnold*

5. Advanced French. Research work in French Home Economics. Lectures and outside readings. One hour a week, Fall, Winter, and Spring quarters. One credit each quarter.

T. 2:00. *Professor Arnold*

6. Advanced French. Research work in French science

and agriculture, particularly horticulture. Lectures and outside readings. One hour a week, Fall, Winter and Spring quarters. One credit each quarter.

Th. 2:00. *Professor Arnold*

Other hours may be arranged for French 3, 4, 5, and 6, if necessary.

SPANISH

SPANISH 1. Grammar, reading, and conversation. Twice a week. Fall and Winter quarters. Two credits each quarter.

T. Th. 9:00. *Professor Arnold*

SPANISH 1. Grammar, conversation, and reading. Four times a week. Winter quarter. Four credits.

M. W. F. S. 9:00. *Professor Arnold*

SPANISH 2. Business correspondence, reading and conversation. Twice a week. Spring quarter. Two credits.

T. Th. 9:00. *Professor Arnold*

GERMAN

3. SCIENTIFIC GERMAN. Rapid reading of scientific texts during first half year with private reading in different subjects according to the course of each student. Specially recommended for students who have had two years' work in German in high school or college and are planning to do advanced work in agronomy, botany, or other sciences. One hour, Fall, Winter, and Spring quarters. Credit will depend on amount of work done. At least one credit each quarter.

F. 11:00. *Professor Arnold*

LATIN

LATIN 1. Grammar and reading and study of English vocabularly. Two hours, Fall, Winter and Spring quarters. Two credits each quarter.

M. W. 8:00. *Professor Arnold*

LATIN 2. A course in Caesar and Cicero will be given if five students or more apply. Credits will depend on amount of work done. Hours to be arranged with instructor.

Professor Arnold

MUSIC

PROFESSOR THATCHER
ASSOCIATE PROFESSOR JOHNSON
MR. SMITH

Students may enter the College orchestra or band without taking any other music course. Two credits. The college orchestra furnishes all the dance playing, students receiving compensation.

1. ELEMENTARY THEORY. Reviews the ground work necessary for students desiring a thoro knowledge of music. Keys, scales, intervals, melody writing, sight singing. Two lectures per week. Fall, Winter, and Spring quarters. Two credits each quarter.

T. Th. 9:00. *Professor Thatcher*

2. APPRECIATION AND HISTORY OF MUSIC. From text. Three hours, Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 11:00. *Professor Thatcher*

3. Elementary Harmony. Text used. Three hours, Fall Winter, and Spring quarters. Home study, 6 hours as a minimum. Applied music, individual and ensemble. Prerequisite, 2 years study, piano or equivalent. Five credits each quarter.

M. W. F. 1:00. *Professor Thatcher*

4. Advanced Harmony and Analysis. Applied music, individual and ensemble. Prerequisite, Music 3. Home study increased for this course. Five hours, Fall, Winter, and Spring quarters. Five credits each quarter.

Time to be arranged. *Professor Thatcher*

5. Counterpoint and Small Forms. Applied music, individual and ensemble. Prerequisite, Music 4. Fall, Winter, and Spring quarters. Five credits each quarter.

Hours to be arranged. *Professor Thatcher*

6. Orchestra Class. To provide for study of standard orchestral works and to furnish music for balls, parties, and operas. One credit.

T. Th. 5:00. *Professor Thatcher and Mr. Smith*

7. Choir. To furnish music for chapel exercises and special occasions. Three hours per week. Fall, Winter, and Spring quarters. One credit each quarter.

M. W. F. 12:00. *Associate Professor Johnson*

8a. Glee Club. An organization of men. Membership is limited in number and decided by competition. Three hours a week. Days and hours of practice to be arranged. Fall, Winter, and Spring quarters.

Associate Professor Johnson

8b. Ladies' Chorus. Membership is limited and decided by competition. Three hours a week. The Glee Club and La-

dies' Chorus join in giving college opera. Fall, Winter, and Spring quarters. *Associate Professor Johnson*

9. Public School Music. Ability to play and sing required. Applied music in choir or glee club. Deals with theory and methods of teaching, music supervision, programs. Three hours per week. Any quarter. Two credits.

Hours to be arranged. *Associate Professor Johnson*

10. Band. To provide for study and practice of band instruments and to furnish music for athletic meets and outdoor gatherings. Fall, Winter, and Spring quarters. One credit each quarter. *Mr. Smith*

Private Instruction may be had (the pupil paying the teacher's fee) in the following: Voice, Piano, Violin, Orchestral and Band Instruments. One credit a quarter in each course will be allowed if pupil is enrolled in Applied Music only.

Recitals by advanced students are given once a month.

PHYSICAL EDUCATION

Professor R. O. Porter
Medical Supervisor of Students

Assistant Professor Jensen
Assistant Professor Romney
Head Coach
Miss————————

Work in physical education is arranged with the purpose of giving each student sufficient exercise to maintain physical health and a high degree of mental efficiency.

After careful physical examination work is prescribed to

meet the need of each individual. Physical training is required of all students.

Adequate opportunity is afforded students to take part in class games and contests. Inter class sports are open to students who have never won a letter or who are not trying for the teams.

Athletic competition with colleges and universities in the State and Rocky Mountain Conference forms an interesting part of the work. Individual skill in athletics is obtained only after hours of hard work and continued sacrifice. The promotion of honor and college spirit through athletic games and meets constitutes an important feature of the department.

PHYSICAL EDUCATION FOR MEN

1. Football. Practice in football technic, equipment; theory of defensive and offensive play; study of rules, duties of officials, schedule making, and general preparation for coaching. Fall quarter.

Daily, 5:00.

2. Track and Field Athletics. Instruction and practice; how to choose men for different events; track rules and duties of officials; theory of training for endurance, speed, skill, strength; problems of temperament, climate, traveling, and professionalism. Spring quarter.

Daily, 5:00.

3. Basketball. Instruction and practice; history, principles and technic of the game; methods of training and coaching; study of rules and duties of officials. Winter quarter.

Daily, 5:00.

4. Baseball. Instruction and practice. Spring quarter.

Daily, 5:00.

5. Gymnasium Work. Required of all students. Swedish

gymnastics, callisthenic drills and gymnasium games. Students taking the course must learn to swim before receiving credit. Fall, Winter, and Spring quarters.

Sec. 1, M. W. F. 9:00; Sec. 2, T. Th. S. 9:00.
Sec. 3, M. W. F. 10:00; Sec. 4, T. Th. S. 10:00.
Sec. 5, M. W. F. 11:00; Sec. 6, M. W. F. 12:00.
Sec. 7, M. W. F. 1:00; Sec. 8, M. W. F. 2:00.

PHYSICAL EDUCATION FOR WOMEN

The chief purpose of the Department is for the physical betterment of the women of the institution. It strives to develop such physical habits as make for vigor and efficiency and counteract the sedentary life of the student.

10. Elementary Gymnastics. A course in elementary gymnastics planned to meet the needs of those who have had no physical education. For all girls registered as vocational students. Fall, Winter, and Spring quarters. One credit each quarter.
T. Th. 1:00.

11. Practical Gymnastics. Designed to furnish activity of such kind and in such manner as will secure erect carriage and good motor control. The course consists of lectures in hygiene, general gymnastics, folk dancing, plays and games. Required for graduation. Fall, Winter, and Spring quarters. One credit each quarter.
Sec. 1, M. W. F. 10:00; Sec. 2, M. W. F. 1:00.

12. Advanced Practical Gymnastics. A continuation of Physical Education 11. Required for graduation. Prerequisite Physical Education 11. Fall, Winter, and Spring quarters. One credit each quarter.
Sec. 1, T. Th. S. 10:00; Sec. 2, M. W. F. 11:00.

13. Aesthetic Dancing. Aesthetic dancing. A course in dancing technic, fundamentals of interpretive work, and descrip-

tive dances. Open to all women who have completed Physical Education 11 or its equivalent. Fall, Winter, and Spring quarters. One credit each quarter.

M. W. F. 3:00.

14. Plays and Games. A practical course designed to make students proficient in playing the more common competitive games as baseball, volley ball, hockey, tennis, and hand ball. Prerequisites, Physical Education 11 and 12. Fall, Winter, and Spring quarters. One credit each quarter.

T. Th. 3:00.

15. Social Dancing. Instruction in standardized modern dances for men and women. Winter quarter.

W. 5:00.

16. Interpretive Dancing. A course in advanced technic, descriptive, dramatic dancing, and dance composition open to all women who have completed Physical Education 13. Prerequisite Physical Education 13. Fall, Winter, and Spring quarters. One credit each quarter.

M. W. F. 4:00.

PHYSICS

Professor F. L. West
Associate Professor Willard Gardner
Mr. Edlefsen
Mr. Ewing

JUNIOR COLLEGE COURSES

1a, 1b, 1c. General Physics. The elements of Physics, including mechanics, heat, electricity and magnetism, sound and light. Lectures are illustrated by experiments and lantern slides. Two recitations and one laboratory period, Fall, Winter, and

Spring quarters. Three credits each quarter. Physics 1b (Electricity and Magnetism) is open to winter course students.

Lec. T. Th. 9:00; lab. any afternoon 2:00 to 5:00.

Professor West

2a. Applied Mechanics and Engines. Prerequisite, high school physics. Three recitations and two laboratory periods. Fall quarter. Five credits.

Lec. T. Th. S. 8:00; lab. M. W. or T. Th. 2:00 to 5:00.

Professor West

2b. Applied Electricity. Prerequisite, high school physics. Three recitations and two laboratory periods. Winter quarter. Five credits.

Lec. T. Th. S. 8:00; lab. M. W. or T. Th. 2:00 to 5:00.

Professor West

2c. Heat, Light, and Sound. Prerequisite, high school physics. Three recitations and two laboratory periods. Spring quarter. Five credits.

Lec. T. Th. S. 8:00; lab. M. W. or T. Th. 2:00 to 5:00.

Professor West

3. Elementary Applied Mechanics. Thermodynamics, steam and gasoline engines. Six credits.

(Not given in 1919-20). *Professor West*

4. Applied Electricity. Three recitations a week. Prerequisite, elementary physics. Fall quarter. Three credits.

M. W. F. 8:00. *Professor West*

5. Chemical Physics (Chemistry 16). Including the atomic theory; kinetic theory of gases; gaseous, liquid, and solid

states; solutions; thermochemistry and radioactivity with special emphasis on osmotic pressure and diffusion. Prerequisites, Elementary Physics and Chemistry. Winter quarter. Three recitations. Three credits.

M. W. F. 8:00. *Professor West*

6. METEROLOGY OR THE PHYSICS OF THE ATMOSPHERE. The methods of weather observations, predictions, frost warnings, and the relation of climate to agriculture. Prerequisite, Elementary Physics. Spring quarter. Three credits.

M. W. F. 8:00. *Professor West*

SENIOR COLLEGE COURSES

7. ADVANCED LABORATORY WORK. One to five credits each quarter. Recommended to students taking Physics 4 and 5.

Daily, 2:00 to 5:00. *Professor West and Mr. Edlefsen*

8. MECHANICS, LIGHT, SOUND, THERMODYNAMICS, AND PHYSICAL CHEMISTRY. Prerequisite, Calculus.

(Not given in 1919-20). *Professor West*

9. ELECTRICITY AND MAGNETISM. Six credits.

(Not given in 1919-20). *Professor West*

10. ALTERNATING CURRENT ELECTRICITY AND ITS APPLICATION TO INDUSTRY. Two recitations a week. Fall, Winter, and Spring quarters. Two credits each quarter.

W. F. 9:00. *Professor West*

11. TELEGRAPHY. Morse or International code. Any quarter. One credit a quarter.

M. W. F. 12:00. *Professor West*

PHYSIOLOGY

PROFESSOR R. O. PORTER

JUNIOR COLLEGE COURSES

1. PHYSIOLOGY. Lecture and demonstration course in human anatomy and physiology covering gross and microscopic structure and functions of each part of the body studied. Consideration will be given the subjects of respiration, circulation, and metabolism. Three lectures per week. Fall or Winter quarter. Three credits.

Sec. 1. Fall quarter, M. W. F. 9:00.

Sec. 2. Winter quarter, T. Th. S. 9:00.

Professor Porter

2. PHYSIOLOGY. A continuation of Physiology 1, but may be taken by properly qualified students who have not had Physiology 1. Special emphasis will be placed upon the structure and function of the nervous system. Other subjects to be considered are glands of internal secretion and reproduction. Prerequisite, Physiology 1. Three leectures per week. Winter or Spring quarters. Three credits each quarter.

Sec. 1. Winter quarter, M. W. F. 9:00.

Sec. 2. Spring quarter, T. Th. S. 9:00.

Professor Porter

5. SOCIAL HYGIENE. Physiology and hygiene of sex. Social diseases. One lecture per week. Winter quarter. One credit.

Hours to be arranged. *Professor Porter*

POLITICAL SCIENCE

PROFESSOR HENDRICKS
PROFESSOR DAINES
JUDGE BULLEN
MR. BARBER

For related work see History, Economics, and Sociology.

VOCATIONAL COURSES

a. INDUSTRIAL AND COMMERCIAL LAW. The elementary principles of law relating to common business transactions, including contracts, sales, promissory notes and bills of exchange, contracts of common carriers, agency, partnership and corporations. Winter and Spring quarters. Three credits each quarter.
M. W. F. 8:00. *Judge Bullen*

b. CIVICS. United States government; for the practical student. Spring quarter. Three credits.
M. W. F. 12:00. *Mr. Barber*

JUNIOR COLLEGE COURSES

1a. THEORY OF GOVERNMENT. The principles and structure of politically organized society. Fall quarter. Three credits.
M. W. F. 10:00. *Professor Daines*

1b. COMPARATIVE GOVERNMENT. A study of the form and workings of the important present day governments of the world. Winter quarter. Three credits.
M. W. F. 10:00. *Professor Daines*

1c. POLITICAL PARTIES. A study of the government of the United States and of the leading European States as affected by political parties. Spring quarter. Three credits.
M. W. F. 10:00. *Professor Daines*

4. Contracts. The law of contracts; the law of agency; the law of partnership and of commercial paper.
(Not given in 1919-20).

5. The law of real estate, of sales, of debtor and creditor, of suretyship; of insurance, of banks and bankruptcy, and of corporations. Fall and Winter quarters. Three credits each quarter.
T. Th. S. 8:00. *Judge Bullen*

SENIOR COLLEGE COURSES

6. Irrigation Law or the Law of Waters. The right of appropriation, natural and artificial water courses, limitation of use, protection of rights, disposal of rights, percolating water, distribution of water, etc. Winter and Spring quarters. Three credits each quarter.
M. W. F. 8:00. *Judge Bullen*

7. American Diplomacy. Study of the principles and practice of American diplomacy. Spring quarter. Three credits.
(Not given in 1919-20).

8. American Consular Service. Critical analysis of our consular service.
(Not given in 1919-20).

PUBLIC SPEAKING

Assistant Professor Huntsman

JUNIOR COLLEGE COURSES

1. Vocal Expression. A study of the principles of expressive reading and the vocal interpretation of literature with supplementary work in voice development and bodily expression. Fall, Winter, and Spring quarters. Three credits each quarter.
M. W. F. 11:00. *Assistant Professor Huntsman*

2. Vocal Interpretation. The aim of this course will be to develop emotional power, literary appreciation, and the ability to interpret the printed page. Prerequisite, Vocal Expression. Fall, Winter, and Spring quarters. Fall quarter: lyrics and ballads. Winter quarter: short stories. Spring quarter: scenes from Shakespere's plays. Two credits each quarter.

T. Th. 10:00. *Assistant Professor Huntsman*

3. Extermporaneous Speaking. Practice in extemporaneous speaking on subjects of current interest. Supplementary work in voice development and the correction of defects in speech. Occasional practice assignments in reading. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 9:00. *Assistant Professor Huntsman*

SENIOR COLLEGE COURSES

4. Public Speaking. A study of the principles of effective public speaking with practice in the preparation and delivery of speeches adapted to various audiences. Occasional practice assignments from the masterpieces of oratory. Prerequisite, Extemporaneous Speaking. Fall, Winter, and Spring quarters. Two credits each quarter.

T. Th. 9:00. *Assistant Professor Huntsman*

5. Public Reading. A course in the preparation of poems, stories, and scenes from novels and plays for public presentation. Open to a limited number only. Spring quarter. Two credits.

T. Th. 12:00. *Assistant Professor Huntsman*

6. Dramatic Interpretation. A laboratory course in the modern drama. The plays of Ibsen, Hauptmann, Maeterlinck, Shaw, Galsworthy, Yeats, Synge, and other contemporary dramatists will be studied from the interpretative side. Members of the class will vocally interpret characters and scenes assigned

for individual study and several plays will be presented to the public as part of the class work. Prerequisites, Vocal Expression and Vocal Interpretation. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 1:00. *Assistant Professor Huntsman*

7. Play Production. The reading and discussion of a wide range of plays suited to amateur acting. This course is particularly designed for those who intend to take charge of dramatics in high schools, clubs, Mutual organizations, etc. Some attention will be given to the staging and costuming of plays and to the art of "make up." First term of the Summer quarter. Three credits.

Hours to be arranged. *Assistant Professor Huntsman*

RANGE MANAGEMENT

Assistant Professor Becraft

VOCATIONAL COURSES

a. Elementary Range Management. Elementary course in practical range problems including methods of handling livestock. Three lectures. Winter quarter. Three credits.

M. W. F. 9:00. *Assistant Professor Becraft*

JUNIOR COLLEGE COURSES

1. Range Problems. A general course on range problems including carrying capacity, range improvement and causes of deterioration, forage plants, poisonous plants, and methods of handling livestock. Prerequisite, Botany 2. Three lectures. Winter quarter. Three credits.

M. W. F. 11:00. *Assistant Professor Becraft*

RURAL SANITATION AND PUBLIC HEALTH

Professor R. O. Porter
Professor Greaves
Professor Ray B. West
Professor Henderson
Professor Frederick
Professor Whitacre
Mr. Carter
Mr. Sorenson

JUNIOR COLLEGE COURSES

1. Pathogenic Bacteriology (Bacteriology 3). Fundamentals, morphology, biology, function, etc. The pathogenic bacteria are considered in relation to specific diseases especially with regards the subject of immunity. Breakage deposit $2.50. Prerequisite, Bacteriology 2. Three lectures. Two laboratory periods. Winter quarter. Five credits.

Lec. M. W. F. 1:00; lab. W. F. 2:00 to 5:00.

Professor Greaves

2. Human Anatomy and Physiology (Physiology 1). Lecture and demonstration course in human anatomy and physiology, covering the gross and microscopic structure and function of each part of the body. Consideration will be given to the subjects of respiration, circulation, and metabolism. Fall or Winter quarter. Three credits.

Sec. 1. Fall quarter. M. W. F. 9:00.

Sec. 2. Winter quarter. T. Th. S. 9:00.

Professor Porter

3. Rural Water Supply and Waste Disposal (Rural Sanitation 6). Methods of (a) supplying farm and rural communities with sanitary water; (b) handling waste of the farm and small town. Spring quarter.

M. W. F. 11:00. *Professor West*

4. Parasitology (Zoology 5). The classification, structure, and life history of animal parasites; these include the pathogenic protozoans, flukes, tapeworms, roundworms, and arthropods that act as carriers or organisms injurious to man and the domestic animals. Four lectures and one laboratory period. Fall quarter. Five credits.

Lec. M. W. F. 8:00; lab. Th. 2:00 to 5:00 *Mr. Sorenson*

5. First Aid. Treatment of emergencies and accidents. Two sections. Winter quarter. Two credits

Hours to be arranged. *Professor Porter*

6. Home Nursing (Household Administration 2). Scope of home nursing. Treatment of common ailments. Use of drugs, patent medicines, etc. Prerequisites or parallel, Chemistry 1 and Bacteriology 2. Spring quarter. Three credits.

M. W. F. 10:00. *Professor Porter*

SENIOR COLLEGE COURSES

7. Sanitation (Bacteriology 8). Principles of sanitation; nature of disease, its spread, and means of prevention and disinfection; sanitary arrangement and construction of farm buildings. Three lectures. Prerequisite, Bacteriology 2. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 11:00. *Professor Greaves*

8. Advanced Physiology (Physiology 2). Special emphasis will be placed upon the structure and function of the nervous system. Other subjects to be considered are glands of internal secretion and reproduction. Prerequisite or parallel, Physiological Chemistry. Winter or Spring quarter. Three credits.

Sec. 1. Winter quarter. M. W. F. 9:00.

Sec. 2. Spring quarter. T. Th. S. 9:00.

Professor Porter

9. Eugenics (Zoology 8). The principles of genetics as applied to the human race. Attention is given the historical development and needs for eugenics, the inheritance of physical, mental, and moral traits; human crosses, consanguinous marriages, eugenic proceedure, and other principles which influence the innate qualities of human beings. Prerequisite, Zoology 6. Four lectures each week. Spring quarter. Four credits.

M. W. F. S. 8:00. *Professor Henderson*

10. Dairy Bacteriology (lecture). (Bacteriology 5a.) The bacteria of milk, buter and cheese; communicable diseases in their relation to the dairy; contamination by air, water, utensils; desirable and undesirable fermentation. Two lectures. Winter quarter. Two credits.

T. Th. 8:00. *Mr. Carter*

11. Dairy Bacteriology (laboratory). (Bacteriology 5b.) Methods used in the bacteriological examination of milk and dairy products. May accompany Bacteriology 5a. Breakage deposit, $2.50. Prerequisite, Bacterioloby 1 or 2. Winter quarter. Three credits.

M. W. F. 2:00 to 5:00. *Mr. Carter*

12. Social Hygiene (Physiology 5). Physiology and hygiene of sex. Social diseases. Winter quarter. One credit.

Hours to be arranged. *Professor Porter*

13. Special Diets (Foods 3). Choice and preparation of food under conditions that present definite problems; as for infants and children, school lunches, and the sick. Laboratory practice in preparation of foods suitable to demands in given instances. Collateral reading. Prerequisite Foods 4. Fall quarter. Three credits.

Lec. W. F. 8:00; lab. 2:00 to 5:00. *Professor Whitacre*

14. Sanitary Statistics (Bacteriology 9). Vital statistics showing the effect of sanitary precautions upon health in cities and rural communities. Prerequisite Bact. 8. Two lectures. Spring quarter. Two credits.

T. Th. 8:00. *Mr. Carter*

15. School Sanitation (Bacteriology 14). Sanitary problems confronting the teacher in the rural and urban districts. Spring quarter. Three lectures.

M. W. F. 8:00. *Mr. Carter*

16. Sanitary Analysis (Bacteriology 6). Methods used by the sanitary inspector in examining water, milk, and other foods. Breakage deposit $2.50. Prerequisites, Chemistry 6 and Bacteriology 1 or 2. Time and credit to be aranged.

Professor Greaves

17. Special Food Problems (Foods 10). This course is in the nature of seminar work. Project to be planned with instructor and carried out under her supervision. Prerequisites Foods 2 and 4. Fall, Winter, and Spring quarter. Hours to be arranged with instructor.

Professor Whitacre

18. Public Health and Preventative Medicine. Lecture, demostration, and clinic course. Cases will be shown of the various communicable and preventable disease. Emphasis will be placed upon their detection and diagnosis and methods of prevention and eradication. Actual practice under direction of a physician in inspection and health supervision of schools will form a part of this course. Prerequisites Physiology 2 and Bacteriology 8. One lecture and three hours clinic per week. Fall, Winter, and Spring quarters. Hours to be arranged with instructor.

Professor Porter

19. Advanced Bio-Chemistry (Bacteriology 15). Bacteriological and Chemical methods used in diagnosing of diseases. Winter quarter. Five credits. Lab. to be arranged.

Professor Greaves

20. Sanitary Inspection. Inspection of slaughter houses, packing houses, butcher shops, etc., and means of detection of communicable diseases and spoilage in meat products. Prerequisite, Bact. 2. One quarter. Three credits.

Professor Frederick

Students who wish to specialize in Public Health work will be required to present for graduation 24 hours credit to be selected from this group of subjects. They must include Rural Sanition and Public Health, 18. (Public Health and Preventative Medicine) in addition to the fulfilling of all other requirements.

SOCIOLOGY

Professor Hendricks

See Economics and Political Science for related work.

JUNIOR COLLEGE COURSES

2. Rural Sociology. The principles of sociological science applied to the problems of modern agricultural and rural communities. Spring quarter. Three credits.

M. W. F. 10:00. *Professor Hendricks*

SENIOR COLLEGE COURSES

1. Principles of Sociology. The foundations of sociology; social organs, social structure, and social activities. Fall quarter. Three credits.

M. W. F. 10:00. *Professor Hendricks*

3. Applied Sociology. Concrete applications of sociological principles to modern urban problems of general political conditions. Winter quarter. Three credits.

M. W. F. 10:00. *Professor Hendricks*

STENOGRAPHY AND TYPEWRITING

Professor P. E. Peterson
Mr. Howell
Miss Farrell

STENOGRAPHY

VOCATIONAL COURSES

a. The fundamental rules of the Isaac Pitman system of shorthand, the Centenary edition being used. Five hours. Fall, Winter, and Spring quarters. Four credits each quarter.

Daily, except Saturday 9:00. *Mr. Howell*

b. In this class the rules of the system will be thoroly reviewed and applied. The attainment of speed will be the feature of this course, which will be open to the writers of any system of shorthand. The work in the last quarter will include office training and business practice, so that students may become familiar with the use of modern office appliances. Five hours, Fall, Winter, and Spring quarters. Four credits each quarter.

Daily, except Saturday, 10:00. *Mr. Howell*

Special. A special class will be held for such students as desire to take stenography during the Winter quarter, the work given being the same as Stenography a. Winter quarter. Three credits.

M. W. F. 11:00. *Mr. Howell*

JUNIOR COLLEGE COURSES

1. A class confined exclusively to students of College grade. This will be an intensive course with the object of preparing students for teaching positions. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 1:00. *Mr. Howell*

2. Advanced stenography; speed course. Five hours, Fall, Winter, and Spring quarters. Four credits each quarter.

Daily, except Saturday 10:00. *Mr. Howell*

PENMANSHIP

In this class it will be sought to develop a free, legible business handwriting. Good handwriting is absolutely necessary for all matters of business. Fall and Spring quarters. One credit.

M. W. F. 11:00. *Mr. Howell*

TYPEWRITING

The typewriting room is open from 8:00 to 5:00. Students must arrange with instructor for practice periods.

VOCATIONAL COURSES

a. Beginning Course. Correct fingering and proper manipulation of the machine. Fall, Winter, and Spring quarters One credit each quarter.

Miss Farrell

b. Second Year Course. Daily exercises in which accuracy is required. Fall, Winter, and Spring quarters. One credit each quarter.

Miss Farrell

JUNIOR COLLEGE COURSES

1. Freshman Course. All stenographic students should take this course. Accuracy and form are insisted upon. Fall, Winter, and Spring quarters. One credit each quarter.

Miss Farrell

2. Sophomore Course. Continuation of course 1. Fall, Winter, and Spring quarters. One credit each quarter.

Miss Farrell

TEXTILES AND CLOTHING

Professor Johanna Moen
Miss Lavina Richardson
Miss Rozina Skidmore

Students who elect Textiles and Clothing as their major are required to complete the following courses: Textiles and Clothing 1, 2 (a) (b), and 6.

VOCATIONAL COURSES

a. Hand Sewing and Garment Making. Planned for students who can spend only a short time at the College. Training in hand and machine sewing. Drafting and use of commercial patterns. Selection of suitable materials for underwear and dresses. Design and construction of simple garments. Winter quarter. Five credits.

Daily, except Saturday, 2:00 to 5:00. *Miss Skidmore*

b. Household Textiles and Dressmaking. Training in intelligent purchase and use of various fabrics for clothing; pattern and manipulation; repair and use of worn materials, with

construction of undergarments and dresses. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 9:00 to 11:00. *Miss Richardson*

JUNIOR COLLEGE COURSES

1a. Review of Technic by Practical Problems. The application of hand and machine sewing to household articles, underwear, children's clothing, and simple dresses. Drafting, designing, and use of patterns. Consideration of suitable materials for household use and clothing. Prerequisite or parallel, Art 1 and 21. Fall quarter. Two credits.

M. W. 2:00 to 5:00. *Professor Moen and Miss Richardson*

1b. Elementary Dressmaking. Continuation of course 1a. Prerequisite, Clothing 1a; parallel, Art 21. Winter and Spring quarters. Two credits each quarter.

M. W. 2:00 to 5:00. *Professor Moen and Miss Richardson*

2a. Textile Fabrics. This course considers the primitive forms and present methods of carding, spinning, weaving, and finishing of cotton, wool, silk, linen, and other important fibres, and their properties and values in relation to manufacture and use. Three lectures. Fall quarter. Three credits.

M. W. F. 10:00. *Professor Moen*

2b. Economics of Textiles. Identification and grading of textile materials, their names, prices, and widths. Qualitative testing. Training in selection of ready-made clothing, and household furnishings, clothing budgets, etc. Prerequisites, Clothing 1b and Textiles 2a. Three lectures. Winter quarter. Three credits.

M. W. F. 10:00. *Professor Moen*

2c. Chemistry of Textiles. Chemical methods for the

identification and estimation of the textile fibres, including complete quantitative determination of cotton, wool, silk, and linen substances in fabrics. Chemistry of dyeing and bleaching. Prerequisites, Chemistry 18, Textiles and Clothing 2a and 2b. Spring quarter. Three credits.

Hours to be arranged. *Associate Professor Hirst*

3. Millinery. Designing and drafting patterns for hats; construction of frames from buckram, rice net, and wire; various methods of covering foundations. Preparation of trimmings. Renovation of materials. Each student makes two hats. Prerequisites or parallel, Art 1 and 21. Two credits each quarter.

Sec. 1, Fall and Winter quarters, T. Th. 9:00 to 11:00.

Sec. 2, Winter and Spring quarters, T. Th. 2:00 to 4:00.

Miss Richardson

4. Handwork and Weaving. Lectures and laboratory work including practical instruction in the fundamental stitches applicable to household furnishings and clothing. The selection, preparation, care and repair of bed linen, table linen, draperies, etc. Simple weaving, crochetting, knitting, and tatting. Prerequisite or parallel, Art 27k and Clothing 1. Fall, Winter, and Spring quarters. Two credits each quarter.

T. Th. 9:00 to 11:00. *Professor Moen*

SENIOR COLLEGE COURSES

5a. History of Costume. A study of Egyptian, Grecian, Roman, early and modern French costumes. Three lectures. Fall quarter. Three credits.

M. W. F. 10:00. *Professor Fletcher*

5b. Costume Design. Design in costume, rhythm of line, harmony of color. Sketching gowns and hats; study of styles suitable to various types. One lecture and two laboratories. Winter quarter. Three credits.

Lec. M. 2:00; lab. M. W. 2:00 to 5:00. *Professor Fletcher*

5c. Application of Costume Design. Practical training in the use and adaptation for different individuals and purposes, designs made in Textiles and Clothing 5b as well as designs taken from current fashion magazines. Modeling in paper and crinoline and making of one costume. Prerequisites, Textiles and Clothing 1a and 1b; and 5a and 5b, or their equivalents. One lecture and one laboratory. Spring quarter. Two credits.

Lec. W. 10:00; lab. F. 2:00 to 5:00. *Professor Moen*

6. Advanced Dressmaking. The application to costume of line and color harmony. Pattern making and draping with materials. Construction of dresses in cotton, wool, and silk materials, with special emphasis on the technic of dressmaking. Prerequisites, Clothing 1, 2, 5. Two laboratories. Fall, Winter, and Spring quarters. Two credits each quarter.

Lab. T. Th. 2:00 to 5:00. *Professor Moen*

VETERINARY SCIENCE

Professor Frederick

VOCATIONAL COURSES

a. Elementary veterinary science for vocational students. Three hours' classwork with one clinic. Winter quarter. Four credits.

Lec. M. W. F. 10:00; lab. W. 2:00 to 5:00.

Professor Frederick

JUNIOR COLLEGE COURSES

1. Veterinary Elements. Introduction to anatomy and physiology and the common ailments of domestic animals; the most prevalent diseases, their distribution, causes, symptoms,

course, diagnosis and treatment; observation and practice in the free weekly clincs. Three hours class work with three hour clinic. Fall or Winter quarter. Four credits.

Lec. M. W. F. 10:00; lab. W. 2:00 to 5:00.

Professor Frederick

2. Comparative Anatomy. Especially for students in agriculture and animal husbandry; also students wishing to follow veterinary science. This course is supplemented with practical work in dissection, and illustrated by skeletons and models. Three lectures and one laboratory. Fall, Winter, and Spring quarters. Three credits each quarter.

M. W. F. 11:00. *Professor Frederick*

3. Obstetrics. Obstetrical anatomy, reproduction, hygiene of pregnant animals. Obstetric operations, accidents of parturition, and diseases of the new-born. The college herd and the surrounding stock breeding community give ample opportunity for practical work. Two hours. Winter and Spring quarters. Two credits each quarter.

Lec. T. Th. 10:00. *Professor Frederick*

4. Physiology. The vital functions of the different species of domestic animals and those of the human body are compared; the physical and chemical laws as related to physiology; the general properties of animal cells,—their origin, development and growth; special physiology of the various organs and tissues of the animal body. Three lectures a week. Fall, Winter, and Spring quarters. Three credits each quarter.

Lec. M. W. F. 9:00. *Professor Frederick*

5. Clinics. Free clinics at the hospital, in which students of veterinary sciences must assist. The numerous cases represent all diseases common to this locality and furnish the clinic with abundant material for observation and practice. Hours and credits to be arranged. Fall, Winter, and Spring quarters.

Clinic W. 2:00 to 5:00; Veterinary Hospital.

Professor Frederick

6. Principles of Horse Shoeing. The anatomy and physiology of the horse's foot; the form of the foot and the direction of the limb; variations in the flight of the foot, styles of going, shoeing of normal and irregular feet; winter shoeing; correction of defects in gait and methods of shoeing hoofs defective in form or diseased. Three hours. Winter quarter; repeated Spring quarter. Three credits.

T. Th. S. 9:00. *Professor Frederick*

SENIOR COLLEGE COURSES

7. Hygiene and Infectious Diseases. A continuation of Veterinary Science 1. A discussion of water and food supply, disinfection, care and management of animals, and feeding of sick animals.

The common infectious diseases prevalent here, methods which should be adopted in their control and eradication. Tests applied for diagnosis, vaccination and serum treatment of animals. Three hours and one laboratory. Spring quarter. Four credits.

Clinics W. 2:00 to 5:00, Veterinary Hospital.

Lec. M. W. F. 10:00. *Professor Frederick*

8. Anatomy and Physiology. A study of the form, structure, and functions of the animal body. Attention is given to all domestic animals and students are required to locate and point out the parts related to the form, movement, and utility of the animal. Two recitation and one laboratory. Fall and Winter quarters. Three credits each quarter.

Lec. W. F. 12:00; lab. W. 2:00 to 5:00; Veterinary Hospital.

Professor Frederick

ZOOLOGY

PROFESSOR HENDERSON
ASSISTANT PROFESSOR HAGAN*
MR. SORENSON

See Entomology for related work.

JUNIOR COLLEGE COURSES

1. ELEMENTARY GENERAL ZOOLOGY. A study of morphology, physiology, differentiation, adaptation and other zoological principles. A brief survey of the animal kingdom is undertaken so that the student will be able to identify the general groups. This course is intended for those who have not studied zoology before and who desire only a general view of the subject. Students in Home Economics, Mechanic Arts, Agricultural Engineering, and Commerce may take the course, but those in General Science and Agriculture and all students desiring a more comprehensive study should take Zoology 3. Two lectures and one laboratory per week. Fall and Winter quarters. Three credits each quarter.

Lec. M. W. 9:00; lab. M. or F. 2:00 to 5:00.

Mr. Sorenson

3. GENERAL ZOOLOGY. A systematic study of the animal kingdom, including its general classification and the relation of the various groups of animals to each other. Emphasis is placed upon structural characteristics, development, function, and relation of organs in the different groups. Three lectures and two laboratories per week. Fall and Winter quarters. Five credits each quarter.

Lec. T. Th. S. 10:00; lab. T. Th. 2:00 to 5:00.

Mr. Sorenson

*On leave of absence.

4. Economic Zoology. Study of the feeding and breeding habits of intermountain vertebrates; their economic relation to agricultural interests. Methods for the control of injurious vertebrates and for the encouragement of beneficial ones are considered. Three lectures and one laboratory per week. Spring quarter. Four credits.

Lec. T. Th. S. 10:00; lab. W. 2:00 to 5:00.

Mr. Sorenson

5. Parasitology. (Rural Sanitation 2). The classification, morphology, and life history of animal parasites. The disease-producing protozoans, flukes, tapeworms, and roundworms receive special study. Arthropods as external parasites and carriers of pathogenic organisms receive attention. Three lectures and one laboratory per week. Fall quarter. Four credits.

Lec. M. W. F. 8:00; lab. Th. 2:00 to 5:00.

Mr. Sorenson

6. Advanced Zoology. The classification, morphology, and comparative anatomy of the vertebrates. Prerequisite, Zoology 1 or 3. Three lectures and two laboratories per week. Fall and Winter quarters. Five credits each quarter.

Lec. M. W. F. 11:00; lab. M. W. 2:00 to 5:00.

Mr. Sorenson

7. Genetics. This course considers the biological principles of life and the inheritance of characters. A study of the germ cells with reference to heredity. The questions of variation, mutation, the inheritance of acquired characters, pure lines, Mendelism, sex-determination, and genetic principles generally are the main subjects of discussion. Prerequisite, Zoology 3 or equivalent. Four lectures per week. Winter quarter. Four credits.

M. W. F. S. 8:00. *Professor Henderson*

8. Eugenics The principles of genetics as applied to the human race. Attention is given the historical development of and needs for eugenics, the inheritance of physical, mental, and moral traits; human crosses, consanguinous marriages, eugenic procedure, and other principles which influence the innate qualities of human beings. Prerequisite, Zoology 7. Four lectures per week. Spring quarter. Four credits.

M. W. F. S. 8:00. *Professor Henderson*

9. Histology and Embryology. A general course of histology and embryology with special reference to man. The Fall quarter is given to lectures and laobratory work on the principles of technic and a study of epithelial tissue. The Winter quarter completes the work in histology and continues with a treatment of the germ cells, their maturation and fertilization. The Spring quarter is given to a comparative study of the embryological development of amphioxus, frog, and man Prerequisite, General Zoology. Two lectures and two laboratories per week. Fall, Winter, and Spring quarters. Four credits each quarter.

Lec. T. Th. 8:00; lab. M. W. 2:00 to 5:00.

(Not given in 1919-20) *Professor Henderson*

10. Research. The student who wishes to engage in some line of original research and is qualified to do so may select and study some topic from eugenics, ecology, morphology, or other zoological subjects. Thesis. Time and credits to be arranged.

Professor Henderson, Assistant Professor Hagan, Mr. Sorenson*

*On leave of absence.

Twenty-Fifth Annual Commencement

June, 1918

GRADUATES WITH DEGREE OF BACHELOR OF SCIENCE

AGRICULTURE

Agronomy

Bachman, Albert Edwin ..... Santaquin, Utah
Boberg, Elroy ..... Draper, Utah
Jennings, James Riley ..... Provo, Utah
Jensen, Irving Joseph ..... Hyrum, Utah
Kirkham, Ebenezer John ..... Logan, Utah
Smith, Albert Edward ..... Manassa, Colorado
Smith, Lewis Calder ..... Smithfield, Utah

Botany

Nuffer, Louis Ferdinand ..... Logan, Utah

Entomology

Thorne, George Gerald ..... Salt Lake City, Utah

Horticulture

Heldberg, Gustave Oscar ..... Logan, Utah

Animal Husbandry

Harmon, Lawrence Barnes ..... American Fork, Utah
Thayne, William James ..... Yost, Utah

AGRICULTURAL ENGINEERING

Jerman, Reid ..... Santaquin, Utah
Larson, Ernest Oliver ..... Santaquin, Utah
Woodhouse, Jesse Monroe ..... Logan, Utah

MECHANIC ARTS

Hughes, Jonathan Marion ..... Farmington, Utah
Kirby, Frank Joseph ..... Sugar, Idaho
Mitchell, Leland R. ..... American Fork, Utah

COMMERCE AND BUSINESS ADMINISTRATION

Christiansen, Howard Arthur ..... Richfield, Utah
Roylance, Jesse ..... Springville, Utah

GENERAL SCIENCE

Braithwaite, Frederick C. ..... Logan, Utah
Cotter, Ralph Ulysses ..... Lehi, Utah
Croft, George Albert ..... Ogden, Utah
Hansen, George Henry ..... Richfield, Utah
King, George Edward ..... Garland, Utah
Kremer, Clara Marie ..... Logan, Utah
Lindquist, Ariel ..... Logan, Utah
Pedersen, Peter A. C. ..... Bear River City, Utah
Skanchy, Fritz Nansen ..... Logan, Utah
Sorensen, Lionel Winton ..... Gunnison, Utah

HOME ECONOMICS

Brinton, Orissa ..... Springville, Utah
Cannon, Elizabeth ..... Salt Lake City, Utah
Cardon, Laura Cooper ..... Logan, Utah
Chipman, Florence Salena ..... American Fork, Utah
Dunford, Rachel Grant ..... Salt Lake City, Utah
Hayball, Edith ..... Logan, Utah
Jones, Effie ..... Cedar City, Utah
Kerr, Vie Bankhead ..... Wellsville, Utah
Larson, Estella ..... Logan, Utah
Nielson, Eva Joy ..... Ephraim, Utah
Sorenson, Emma Baker ..... Mendon, Utah
Tanner, Norma ..... Salt Lake City, Utah
Thorn, Eliza ..... Springville, Utah
Underwood, Elizabeth ..... Logan, Utah
Wallace, Edith ..... Salt Lake City, Utah
Wooley, Olive ..... Ogden, Utah
Wyatt, Caroline Archibald ..... Wellsville, Utah

GRADUATE WITH DEGREE OF MASTER OF SCIENCE

Agriculture

Richards, Bert Loren ..... Logan, Utah

Honors, 1918-1919

Scholarship: The following students have been selected as deserving special distinction for high achievement in scholarship. They have, accordingly, received either a "Scholarship A" or "Honorable Mention":

Scholarship "A":

David Jehu Cox
Dudley David Crafts
Maurice Blood Linford
Elna Miller
Aldyth Vernon
Geneva Wells
Edna White
John Anton Ziebarth

Honorable Mention:

Albert Gustave Ramsperger
Joseph LeRoi Robinson
Stella Young
Evelyn Esplin
Lucian Mecham, Jr.
E. Stanley L. Prescott
Lais Vernon

Debating:

Intercollegiate Debating:

Dudley D. Crafts
A. Hulme Nebeker
Milton Jensen
J. Morris Christensen
Sumner Hatch
Paul Jenkins
Chase Kearl

Oratory:

The Hendricks medal won by:

William J. Snow

The Casto medal won by:

Marguerite Engermann

The Sons of the American Revolution medal won by:

Adren Aitken

Special Awards: The following received Student Body "A" pins:

Dramatics:
E. Stanley L. Prescott

Pianist:
William O. Peterson

Associate Editor of Student Life:
Solon R. Barber

Scholarships: The following students were awarded the Johansen Scholarships for 1919-1920:

G. A. Robison — Mignon Barker
Adren Aitken

Student Body Officers:

Lorenzo H. Hatch ..... President
Lucile Rogers ..... Vice-President
Adaliene Barber ..... Secretary

"Student Life" Staff:

V. Delroy Gardner ..... Managing Editor
Solon R. Barber ..... News Editor
C. Ray Kimball ..... Business Manager

"Buzzer" Staff:

Chase Kearl, Editor — George P. Barber, Manager

The Cardon Medal, given for the best all-round athlete, was won by Carl W. Peterson.

The West Medal, given to the winner of the highest number of points in the inter-class track and field meet, was won by James McDonald.

List of Students, 1918-19

In the following list "a" stands for agriculture; "aema" for agricultural engineering and mechanic arts; "ho" for home economics; "c" for commerce; "g" for general science; "ss" for summer school; "G" for graduates; "S" for seniors; "J" for juniors; "So" for sophomores; "F" for freshmen; "V" for vocational; "SATC" for Student Army Training Corps; "Sp" for special.

Aamodt, Arthur H., SATC ..... Murray
Adams, Erma D., c-So ..... Logan
Adams, Jeanette A., Sp-ho, ss ..... Logan
Adams, J. V., aema-V ..... Logan
Adams, Vaughan M., SATC ..... Monticello
Adamson, Delbert D., SACT ..... Tooele
Aitken, Adren, g-So ..... Preston, Idaho
Aitken, Carrie, c-V ..... Preston, Idaho
Aldous, Joseph A., SATC ..... Sterling, Idaho
Allen, Albert B., SATC a-Sp ..... Nephi
Allen, Denzel C., SATC ..... Logan
Allen, C. Oretta, ss ..... Metropolis, Nevada
Allen, Erma, ho-Sp ..... Richmond
Allen, Heber F., aema-F ..... Raymond, Alberta, Canada
Allen, Lucile, c-V ..... Richmond
Allen, Marion, aema-V ..... Cove
Allen, Reta, c-V ..... Hyrum
Allen, Vernon, aema-V ..... Hyrum
Allred, Medwin E., SATC ..... Smithfield
Allred, Warren, ss ..... Fountain Green
Alvord, Harold S., c-F ..... Logan
Alward, Bert L., SATC ..... Delta
Ames, Jas. Carter, SATC ..... Ogden
Amussen, Eleonora, G-Sp ..... Logan
Amussen, Flora, ss ..... Logan
Amussen, Odetta S., ss ..... Logan
Anderson, Dwight, SATC ..... Monroe
Anderson, Ernest D., aema-V ..... Shelley, Idaho
Anderson, Grant Y., SATC ..... Malad, Idaho
Anderson, Isabell, ho-F ..... Heber
Anderson, Jas. A., SATC ..... Spanish Fork
Anderson, John O., aema-V ..... Millville
Anderson, John Wm., SATC ..... Malad, Idaho
Anderson, LaFayette F., SATC ..... Park City

Anderson, Leo Nels, SATC.....Thatcher, Idaho
Anderson, Mabel, ho-F.....Brigham
Anderson, Maud A., ho-V.....Salt Lake City
Anderson, Reuben C., SATC.....Idaho Falls, Idaho
Anderson, Rosel O., SATC.....Ogden, Utah
Anderson, Robert S., c-V.....Logan
Anderson, Olive, ss.....Ephraim
Anderson, Ruby L., c-V.....Hyrum
Anderson, Stanley R., aema-J.....Ephraim
Andreasen, Clara May, ss.....Hyrum
Andrews, Russell P., aema-V.....Logan
Andrus, Lenard M., aema-V.....Spanish Fork
Andrus, Lucy, ho-F.....Spanish Fork
Angus, Stephen R., SATC.....Aberdeen, Idaho
Askew, Ewart, SATC.....Salt Lake City
Atkinson, Cyril V., SATC.....Logan
Atkinson, Thos. A., SATC.....Rexburg, Idaho
Atkinson, Wando E., SATC.....Rexburg, Idaho
Austin, Edwin Gean, G-Sp SATC.....Montpelier, Idaho
Austin, W. Wayne SATC.....Montpelier, Idaho
Avedian, Giragos, a-J.....Sivas, Armenia
Bachman, Comfort, ho-F.....Eden
Bachman, Halvy E., c-So.....Eden
Baer, Vernon, ss.....Providence
Bair, Marion L., SATC.....Richmond
Baird, Brigham Y., a-G.....Logan
Baird, Chauncey, aema-Sp.....Salt Lake City
Baird, Glen W., SATC.....Drummond, Idaho
Baker, Alvin, SATC.....Minersville
Baker, Dan, ss.....Monroe
Baker, Howard C., SATC.....Grace, Idaho
Balfour, Andrew Y., SATC.....Salt Lake City
Ballam, Willard, g-V.....Logan
Ballantyne, Leanore, ss.....Rexburg, Idaho
Ballif, Paul S., SATC.....Preston, Idaho
Ballif, Serge C., SATC g-F.....Preston, Idaho
Ballinger, Zelda, ss.....Ogden, Utah
Barber, Adaliene, g-J.....Logan
Barber, Adeline, g-F.....Logan
Barber, Ellen, g-S.....Logan
Barber, Francis, ss.....Logan
Barber, Geo. P., a-J.....Logan
Barber, Ruth, g-F.....Logan
Barber, Solon Ray, g-S.....Logan
Barber, Wm. Wendell, c-Sp SATC.....Logan
Barfuss, Leo Henry, aema-V.....River Heights
Barker, Ellis W., SATC.....Ogden
Barker, Lena, ho-J.....Ogden
Barker, Mignon, ho-So.....Salt Lake City
Barlow, Allie R., ss.....Logan
Barlow, Della, ss.....Preston, Idaho
Barlow, Fielding B., a-J.....Ogden

Barnes, Wm. O., SATC.....Dove Creek, Colorado
Barrett, A. Leone, c-V.....Logan
Barrett, N. Lulu, ss.....Logan
Barron, Ada M., ss.....Logan
Barson, Effie L., ho-V.....Clarkston
Barson, Peter E. aema-V.....Clarkston
Bartholomew, A. Gerald, c-V.....Fayette
Bartholomew, Orlo V., SATC.....Fillmore
Bassett, Eldon S., SATC.....Ogden
Bassett, Mary, ss.....Rexburg, Idaho
Bateman, Geo. M., g-Sp SATC.....Paris, Idaho
Bayles, Ella J., ho-S.....Blanding
Bayles, Velyn, ho-V.....Blanding
Beck, Harry J. SATC.....Pocatello, Idaho
Beck, Hyrum, SATC.....Spanish Fork
Beck, Vernon L., SACT.....Spanish Fork
Beckstead, Lois, g-F.....Preston, Idaho
Bedell, Geo. A., aema-V.....Montepelier, Idaho
Bedke, Gladys L., ho-F.....Oakley, Idaho
Beebe, Geo. B., SATC.....Provo
Beech, T. Lyle, SACT.....Sugar City Idaho
Bell, Alfred Mervill, SATC.....Logan
Bell, Evalyn, c-V.....Logan
Bell, Orville, N., SATC.....Rexurg, Idaho
Belnap, R. Stanton, SATC.....Preston, Idaho
Bennett, Maydell, ss.....Downey, Idaho
Bennion, Elma, g-V.....Logan
Bennion, Erma, g-V.....Logan
Bennion, Lora, ho-S ss.....Logan
Benson, Ezra T., SATC.....Whitney, Idaho
Bergesen, Erven O., aema-V SATC.....Logan
Berntson, Enos, ho-V.....Logan
Berntson, Fred N., SATC.....Logan
Berntson, Russell E., c-Sp SATC.....Logan
Berntson, Zeleno, c-V.....Logan
Berrett, Ray Wm.. SATC.....Ogden
Beynon, Clarence E., SATC.....Salt Lake City
Bichsel, Stanley E., g-F.....Ogden
Bigler, David Z., SATC.....Nephi
Bindrup, Nephi V., SATC.....River Heights
Bingham, J. Martin, aema-V.....Ogden
Bingham, Martha, ss.....Ogden
Bingham, Martha, c-V.....Logan
Bingham, Walter F., a-V SATC.....Huntsville
Birch, Clarence R., SATC.....Salt Lake City
Bird, Byron, SATC.....Springville
Bird, Louise, ho-So.....Springville
Bird, Park Boyden, g-F SATC.....Springville
Birkinshaw, Harris D., SATC.....Salt Lake City
Bithell, Yvonne, c-V.....Logan
Bitter, Vernon E., SATC.....Collinston
Biver, Othel, SATC.....Idaho Falls, Idaho

Bjarnason, Lofter, ss.....Logan
Bjerregaard, Oscar, ss.....Nephi
Bjorkman, Swen R., SATC.....Daniel
Bjorkman, Victor E., SATC.....Logan
Blomquist, Eileen, c-V.....Richfield
Bodily, Geo. C., aema-V.....Preston, Idaho
Bonenberger, Leroy, SATC.....Salt Lake City
Booth, John A., ss.....Cedar City
Boothe, Jno. Neff, SATC.....Weston, Idaho
Bott, Victor J., SATC.....Brigham
Bowen, Alice, ss.....Ogden
Bowen, Edith V., ss.....Logan
Bowen, Leslie, aema-Sp SATC.....Spanish Fork
Boyle, Harvey F., SATC.....Ogden
Bradford, Wendell H., SATC.....Spanish Fork
Brain, Bailey B., SATC.....Salt Lake City
Bramwell, Lavon, SATC.....Ogden
Brandley, Ray G., SATC.....Salt Lake City
Brandon, Arthur H., aema-V.....Lark
Brenton, Fay, ss.....Eureka
Brewerton, Gordon S., SATC.....Salt Lake City
Briggs, Isaac, SATC.....Archer, Idaho
Brimhall, Harold M., SATC.....Vernal
Brimley, Wilford C., c-Sp.....Logan
Bringhurst, Jos. C., SATC.....Springville
Brinkerhoff, Warron, aema-V.....Holbrook, Arizona
Broderick, Clinton J., SATC.....Emery
Brown, Agnes, ho-Sp.....Cedar City
Brown, Bessie Ida, ss.....Hyrum
Brown, Elden J., SATC.....Draper
Brown, Feramorz L., SATC.....Lovell, Wyo.
Brown, Hyrum T., SATC.....Ogden
Brown, Jennie C., ss.....Hyrum
Brown, Roland W., g-F.....Driggs
Brown, Schley, SATC.....Woods Cross
Brown, Walter, a-V.....Salt Lake City
Browning, E. Leland, SATC.....Lorenzo, Idaho
Brunson, Clyde F., SATC.....Fillmore
Brunson, Freeman S., SATC.....Fillmore
Budge, Cyril, SATC.....Paris, Idaho
Bullen, H. Keith, aema-F SATC.....Logan
Bullock, John G., SATC.....Provo
Bullough, Benj. P., SATC.....Salt Lake City
Bunce, Geneva, c-V.....Logan
Burgess, Jos. G., SATC.....Tremonton
Burgess, Sadie, c-V.....Hyde Park
Burgoyne, David A., c-S.....Logan
Burgoyne, John M., SATC.....Montpelier, Idaho
Burgoyne, Lucile ss.....Logan
Burke, Kenneth L., SATC.....Pocatello, Idaho
Burnham, Virginia, ho-V.....Logan
Burnham, Anna Edna, ss.....Brigham

Burr, Myrtice C., SATC.....Sunnydell, Idaho
Bush, A. Harold, aema-F.....Malad, Idaho
Bushnell, Daniel D., SATC.....Meadow
Butler, Spencer B., SATC.....Ogden
Caine, Kinnie, ho-F.....Logan
Campbell, Abel L., aema-V.....Providence, Utah
Campbell, Alma R., a-V SATC.....Logan
Campbell, A. Clem, g-So.....Logan
Campbell, Floyd W., SATC.....North Ogden
Campbell, Mazie, ss.....Heber
Cannell, Geo. C., SATC.....Smithfield
Cannon, Jasmine, ss.....Logan
Cannon, Ruth, ho-So.....Salt Lake City
Cannon, W. Tenney, SATC.....Salt Lake City
Capson, Doras C., SATC.....Salt Lake City
Card, Grant, aema-V.....Raymond, Alberta, Canada
Cardon, Grace, ss.....Logan
Carlile, Martha A., ss G-S.....Logan
Carroll, Rulon J., SATC.....Orderville
Carlson, Betty, c-V.....Logan
Carlson, Lester W., c-V.....Logan
Carlson, Olga, ss.....Logan
Carter, Ezra G., a-G.....Logan
Carter, Pearl J., g-J.....Logan
Carter, Sidney F., SATC.....Idaho Falls, Idaho
Carver, Parker P., SATC.....Mink Creek, Idaho
Caster, J. Edward, SATC.....Salt Lake City
Chandler, Jack W., SATC.....Springfield, Idaho
Chatelain, Carl L., SATC.....Salt Lake City
Christensen, Cecil C., c-F SATC.....Logan
Christensen, Edna A., ss.....Tremonton
Christiansen, ElRay L., a-Sp.....Mayfield
Christensen, Floyd, aema-V.....Elsinore
Christensen, Gladys, ss.....Logan
Christiansen, Jas. L., SATC.....Moreland, Idaho
Christensen, Jas. M., c-J.....Logan
Christiansen, Joseph R., a-Sp SATC.....Fountain Green
Christiansen, Nels W., ss g-G.....Hyrum
Christensen, Ruth, ss.....Clarkston
Christensen, Scott S., g-F.....Wellsville
Christensen, Sophrona, ss.....Bear River City
Chugg, J. Venice, c-V.....Nounan, Idaho
Clark, Ella, ss.....Morgan
Clark, Harold J., SATC.....Ogden
Clark, Harold G., c-S.....Morgan
Clark, Homer K., SATC.....Georgetown, Idaho
Clark, Howard N., SATC.....Georgetown, Idaho
Clark, Hyrum Winfield, SATC.....Pleasant Grove
Clark, John A., SATC.....Oakley, Idaho
Clark, Lynn, SATC.....Salt Lake City
Clark, S. Cyril, c-F SATC.....Trenton
Clark, Orson, a-F.....Farmington

Clark, Wayne, SATC.....Springville
Clawson, Elmer C., c-S.....Providence
Clawson, J. Harold, SATC.....Providence
Clement, Raphael, SATC .....Fairview
Clinger, Albert W., SATC.....Lorenzo, Idaho
Closner, Edward F., aema-V.....Montpelier, Idaho
Clyde, Geo. Dewey, SATC.....Springville
Coffman, Glenn W., SATC.....Springville
Coleman, Delbert T., SATC.....Heber
Coleman, Wm. E., aema-V.....Smithfield
Colette, Don John, SATC.....Ogden
Collins, Alma, SATC.....Roosevelt
Comish. Reata, ho-Sp ss.....Franklin, Idaho
Condie, J. Ira, aema-V.....Logan
Condit, S. Amanda, g-So ss.....Logan
Conkwright, Sidney G., a-V.....Salt Lake City
Connor, Roger L., SATC.....Ogden
Conway, Fred J., a-F SATC.....Ogden
Cook, Geo. Wm., SATC.....Ogden
Cook, Harold L., SATC.....Salt Lake City
Cook, Leonard C., SATC.....Evanston, Wyo.
Cook, Merlin N., SATC.....Willard
Cook, Roy H., SATC.....Ogden
Cook, S. Bryson, SATC.....Paris, Idaho
Coombs, Irvin, aema-V.....Fielding
Coombs, Leo E., aema-V.....Fielding
Cooper, Alonzo Fred, SATC.....Pocatello, Idaho
Cornaby, Wm. S., SATC.....Spanish Fork
Cotter, Ralph U., g-G.....Lehi
Cottingham, Jay T., SATC.....Mt. Vernon, So. Dakota
Cox, David J., g-S.....Ogden
Crafts, Dudley D., a-So.....Deseret
Cragun, Eva, ss.....Ogden
Cragun, Kenna A., ho-F.....Vernal
Crandall, R. Irvin, SATC.....Springville
Crane, Anna, ss.....Logan
Crane, Leo H., SATC.....Salina
Cranney, Cleo, ho-Sp.....Logan
Cranney, Wilda, c-V.....Oakley, Idaho
Crawford, Nicholas B., a-V.....Castle Gate
Cressall, Florence, ho-V.....Logan
Criddle, Frederick Wm., SATC.....Morgan
Critchfield, O. Ann, c-V.....Oakley, Idaho
Crockett, Orzo D., SATC.....Preston
Crockett, Verba, c-Sp.....Logan
Crockett, Vernon W., c-V.....Logan
Croft, Gordon, SATC.....Ogden
Crookston, Edna H., ho-F.....North Logan
Crookston, Carl, aema-V.....Logan
Crookston, Laurn E., a-J.....North Logan
Crookston, Ruth, ho-V.....Logan
Crowther, Marilla, ss.....Logan

Cummings, Jos. B., aema-V.....Heber
Cummings, Orville S., SATC.....Heber
Curtis, Lacell, SATC.....Payson
Curtiss, Seymour C., SATC .....Cokeville, Wyo.
Cutler, Bethea, ss..... Hyrum
Cutler, Elvin, aema-V.....Preston, Idaho
Cutler, Frank Doral, SATC.....Salt Lake City
Cutler, Karl H., g-F.....Preston, Idaho
Dahlquist, Hugo M., SATC.....Fort Bridger, Wyo.
Daines, Carmen, ho-So ss .....Logan
Daines, Hazen B., ss.....Hyde Park
Daines, Luella, ss.....Logan
Daines, Newel G., g-So.....Preston, Idaho
Dalley, Marguerite, ho-Sp ss .....Preston, Idaho
Daly, J. LaVern, g-Sp.....Panguitch
Danielson, Oscar J., SATC.....Manti
Danielson, Vivian, ss.....Lewiston
Datwyler, Jos., aema-V.....Logan
Davidson, Georgene, ss.....Logan
Davis, Clae Thos., SATC.....Merna, Nebraska
Davis, Frank L., Jr., SATC.....Sugar City, Idaho
Davis, Margaret R., ho-F.....Willard
Day, Harold K., SATC.....Pocatello, Idaho
Day, Ruby L., c-V.....Castle Dale
Day, Rufus N., SATC .....Fillmore, Idaho
Dean, Geo. M., SATC.....Popatello, Idaho
Deason, Helen A., ss..... .....Park City
Dedman, Wm. A., SATC.....Drummond, Idaho
Dee, Glen S., c-F.....Ogden
DeHaan, Henry, Jr., SATC.....Ogden
Denning, Oliver W., SATC.....Iona, Idaho
Denning, William V., c-V SATC.....Idaho Falls, Idaho
Dewey, Horace Asa, g-J.....Deweyville
Dewey, Thos. A., g-F SATC.....Sandy
Dewey, Wm. E., SATC.....Sandy
DeWitt, H. Dennis, SATC.....Logan
Dickerson, Roy D., SATC.....Lawrenceville, Ill.
Dickson, Desmond, aema-V.....Morgan
Donelsen, Phenoy, SATC.....Salt Lake City
Douglas, Maud, ss..... .....Wellsville
Douglas, Melbourne, SATC.....Ogden
Draper, John R., SATC.....Freedom
Dunbar, A. Lorraine, c-V ss.....Logan
Dunbar, Wallace E., aema-V.....Logan
Dunford, Sterling E., SATC.....Logan
Dunham, Marshall G., SATC.....Garden City
Dunlop, Jeanne, c-V.....Logan
Dunn Jos. V., SATC.....Montpelier, Idaho
Dunn, Leslie S., a-F.....Logan
Durfey, Irene, ss.....Logan
Durrant, Jennie, ss.....Morgan
Dursteler, Carl O., SATC.....Whitney, Idaho

Duzett, Robt. L., c-V.....Emery
Dyreng, Grant M., SATC.....Manti
Earl, Frank J., aema-So.....Fielding
Earl, Glenn N., SATC.....Logan
Eberle, Lillie L., ho-J.....Ogden
Eccles, Emma S., ss.....Logan
Eccles, Geo. S., c-Sp SATC.....Logan
Eck, Albert A., SATC.....Sandy
Edlefsen, Ada, c-V.....Logan
Edmunds, Grace, so-Sp.....Salt Lake City
Edmunds, Kastle J., ss.....Wales
Edmunds, Ruby, ho-So.....Salt Lake City
Edwards, John J., aema-V.....Logan
Edwards, Oliver W., a-Sp SATC.....Logan
Edwards, Ray L., SATC.....Pocatello
Edwards, W. Bryan, c-V.....Logan
Effinger, Arnold W., SATC.....Salt Lake City
Eldredge, Reed S., aema-V.....Woolford, Alberta, Canada
Eliason, Alice F., ss.....Brigham
Eliason, J. Raphael, SATC.....Millville
Ellerman, Adele, c-V.....Logan
Ellsworth, Lewis G., SATC.....Lyman, Wyo.
Elswood, Sidney Wm., SATC.....Bear River City
Ence, Duane H., SATC.....Richfield
Engemann, Herbert H., aema-V.....Eureka
Engemann, Marguerite, ho-So.....Eureka
England, Wallace B., SATC.....Logan
Epperson, James A., SATC.....Salt Lake City
Erdman, Wm., SATC.....Springville
Erickson, Eugenia, ho-V.....Mink Creek, Idaho
Ericson, Charles, g-V.....Salt Lake City
Esplin, Evelyn, ho-J.....Orderville
Esplin, Kezia H., ho-Sp.....Orderville
Evans, Dora, c-V.....Nephi
Evans, Richard A., SATC.....Murray
Eward, Wm. Samuel, SATC.....Lewisville, Ind.
Ewing, Scott P., g-J.....Smithfield
Eyre, Lenoy, SATC.....Minersville
Eyre, Robt. Basil, SATC.....Urie, Wyo.
Falck, Louis, a-Sp.....Ogden
Farnsworth, Esther, ho-S.....Logan
Farr, Dexter, SATC.....Ogden
Farr, Jas. F., SATC.....Ogden
Farr, Vin W., SATC.....Logan
Farrell, Alfred T., c-V.....Logan
Faux, Elva, c-F.....Moroni
Felix, Adolph, aema-V.....Logan
Felt, Jos. A., SATC.....Huntsville
Felt, Milton S., SATC.....Salt Lake City
Ferguson, Bruce D., aema-F SATC.....Spanish Fork
Ferrin, Oscar L., SATC.....Eden

Ferrin, Wallace E., SATC.....Metropolis, Nevada
Fife, Milton, aema-V.....Logan
Finch, Nancy Ellen, g-So.....Salt Lake City
Finlayson, Erma, ss.....Logan
Finnegan, Edgar D., SATC.....Mountain View, Wyoming
Fitzgerald, Franklin J., SATC.....Kamas
Fitzgerald, I. Ensign, SATC.....Woodland
Flaherty, Jas. G., SATC.....Morgan
Flamm, Melvin D., SATC.....Rexburg, Idaho
Flint, Letitia, ss.....Blackfoot, Idaho
Fogelberg, Thelma, c-V ss.....Logan
Folkman, Isabell, g-V.....North Logan
Folkman, Leo S., SATC.....Warren
Follick, G. Reuel, aema-V.....Montpelier, Idaho
Foltz, Andrew J., SATC.....Bucklin, Missouri
Fore, Chas. B., SATC.....Pocatello, Idaho
Foreman, Martin D., aema-V SATC.....Monroe
Forsgren, C. Victor, SATC.....Brigham
Foster, Ida, g-So.....Provo
Foulger, B.L., SATC.....Ogden
Foulger, D. B., SATC.....Ogden
Foutz, Nadine, ho-J.....Ogden
Frame, Arthur M., SATC.....Rigby, Idaho
Francis, Neal G., SATC.....Spanish Fork
Francis, Walter K., SATC.....Morgan
Frankland, Wm. H., SATC.....Murray
Fraughton, Lowell D., SATC.....Heber City
Frederick, Elfriede, ss.....Logan
Frederick, Frank L., SATC.....Burley, Idaho
Frederickson, I. Dewey, SATC.....Salt Lake City, Utah
Fridal, Ira O., SATC.....Tremonton
Frongner, Sybil, ho-So.....Idaho Falls, Idaho
Fry, Jas. W., SATC.....Orderville, Arkansas
Fry, Lester Wm., SATC.....Morgan
Fryer, H. Irving, SATC.....Collinston
Fuller, Dora E., ho-So.....Eden
Fullmer, W. Leigh, SATC.....Tetonia, Idaho
Funk, Leroy C., SATC.....Richmond
Gale, Fred Eugene, SATC.....Ogden
Gardner, Reuben D., SATC.....Spanish Fork
Gardner, V. Delroy, c-J.....Murray
Garfield, Leon, SATC.....Tremonton
Garfield, Northrop E., SATC.....Draper
Garner, Rulon, c-V.....Ogden
Garrett, Leon, c-J.....Nephi
Garrett, Wm. B., SATC.....Wellsville
Gatherum, Jas. E., SATC.....Scofield
Geddes, Lyle S., g-Sp SATC.....Logan
Gee, J. Golden, SATC.....Moroni
Gibbons, Olga B., ss.....Logan
Gibbs, Gideon A., Jr., SATC.....Salt Lake City

Gillespie, Llewellyn, aema-V.....Rexburg, Idaho
Gillespie, Vernon V., aema-F SATC.....Rexburg, Idaho
Glazier, W. Lee Vern, SATC.....Smithfield
Gleed, Julius G., SATC.....Malad, Idaho
Goaslind, Carol P. g-F.....Preston, Idaho
Goaslind, Clara P, g-F.....Preston, Idaho
Golder, Albert J., SATC.....Rexburg, Idaho
Goldthorpe, Harold C., g-G.....Logan
Goodsell, C. Dean, c-Sp SATC.....Logan
Goodwin, Jack, c-V .....Logan
Goodwin, Phoebe, ss.....Trenton
Gorman, Marshall J., aema-V.....Evanston, Wyoming
Grant, Theda C., ss.....Lovell, Wyoming
Greathouse, Earl J., SATC.....Lynndyl
Greaves, Sheldon W., SATC.....Ephraim
Green, George E., c-V.....Logan
Greenhalgh, Alma, c-V.....Logan
Gribble, J. Wm., SATC.....Salina
Griffin, Geo. D., SATC.....Logan
Griffin, W. Everett, SATC.....Cache Junction
Griffiths, Robt. E., SATC c-F.....Smithfield
Grimaud, Virginia, c-Sp.....Logan
Grimmett, Archibald T., SATC.....Moreland, Idaho
Griswold, Thos. S., a-V.....Deeth, Nevada
Groesbeck, W. Berton, SATC.....Springville
Grow, J. Leonard, aema-V.....Huntsville
Grow, Parnell M., aema-V.....Huntsville
Gubler, Helen A., ho-S.....Santa Clara
Gubler, Louis J., aema-Sp.....Santa Clara
Gudmundson, Winfred C., aema-V.....Logan
Guild, Edward L., SATC.....Park City
Gunnell, Joshua B., aema-V.....Logan
Gunnell, Melba, g-V.....Logan
Guymon, Lapreal, g-F.....Huntington
Gwilliam, Geo. S., SATC.....Weiser, Idaho
Hacking, Donald, aema-V.....Archer, Idaho
Hafen, Frederick, SATC.....Springville
Hale, C. Dewey, SATC.....Oakley, Idaho
Hale, Ethel, ss.....Oakley, Idaho
Halgren, Edith, ho-V.....Logan
Hall, Chas. E., SATC.....Richfield
Hall, Geo. R., SATC.....Ogden
Hall, Geo. S., SATC.....Salt Lake City
Halling, Bertha, ss.....Geneva
Hallstrom, Sarah, c-F.....Oakley
Hamlin, Ila, c-F.....Kamas
Hammond, O. Cyril, a-Sp SATC .....Logan
Hammond, Diantha, ss.....Providence
Hancey, Jesse E., g-Sp.....Hyde Park
Hancock, Slade. SATC.....Panguitch
Handley, J. Hurley, aema-Sp.....Widtsoe

Hansen, Aaron A., SATC.....Rexburg, Idaho
Hansen, Bernard L., aema-Sp.....Providence
Hansen, Ernest R., a-Sp SATC.....Salt Lake City
Hansen, Brigham D., aema-V.....Brigham
Hansen, LaRue, ss.....Collinston
Hansen, Leland, a-F.....Collinston
Hansen, Levi L., aema Sp.....Mt. Sterling
Hansen, Lucile, ss.....Collinston
Hansen, Lula, ss.....Providence
Hansen, John M., SATC.....Salt Lake City
Hansen, Leo O., SATC.....Hyrum
Hansen, Neils H., a-V.....Central, Idaho
Hansen, Q. David, SATC.....Richfield
Hansen, Reuben, a-G.....Logan
Hansen, Veda M., ho-V.....Preston, Idaho
Harding, Artho L., SATC.....Provo
Harding, Geo. D. g-S ss.....Logan
Harmison, Jos. S., aema-V.....Menan, Idaho
Harmon, Geo. A., g-So.....Arco, Idaho
Harrington, Ray T., SATC.....Salt Lake City
Harris, Ireta, ho-So.....Logan
Harris, Karl O., a-V.....Logan
Harris, Lamar W., SATC.....Tremonton
Harris, Leland aema-V.....Grace, Idaho
Harris, LeNona ss.....Rexburg, Idaho
Harris, Lottie ss.....Provo
Harris, Luella ss.....Rexburg, Idaho
Harris, Marion L. a-G.....Logan
Harris, Sterling R. a-Sp SATC.....Logan
Harrison, Alton B. g-V SATC.....Logan
Hartvigsen, Leona ss.....Hyrum
Hatch, Katherine C. g-F.....Logan
Hatch, Lafayette T. c-F.....Logan
Hatch, Launa c-V.....Oxford, Idaho
Hatch, Lorenzo H. c-S.....Franklin, Idaho
Hatch, Sumner a-S.....Heber
Hatch, Wm. M. SATC.....Moreland, Idaho
Hatfield, Amos G. SATC.....Springville
Hawk, John K. SATC.....Provo
Hawkes, F. Pratt g-F.....Preston, Idaho
Hawkes, Nellie M. ss.....Logan
Haws, Gladys ho-V.....Logan
Haws, Mabel ho-V.....Logan
Hayward, Clem J. g-So.....Logan
Hayes, Edward A. SATC.....Grace, Idaho
Heath, Nathan J. SATC.....Ogden
Heggie, Felecia L. ho-F ss.....Clarkston
Henderson, Eral W. SATC.....Arimo, Idaho
Henderson, John H. SATC.....Salt Lake City
Hendricks, C. Durrell SATC.....Lewiston
Hendry, Paul SATC.....Salt Lake City
Hersey, Mills I. SATC.....Randlett

Hertell, Walter A. SATC ..... Salt Lake City
Heslop, Austin aema-V ..... Ogden
Hess, DeVerl F. aema-V ..... Logan
Hess, Kenneth aema-V ..... Garland
Hess, Roscoe W. g-V ..... Logan
Heward, Glen B. SATC ..... Holbrook, Arizona
Hewitt, Don W. SATC ..... Marion
Heywood, Ida g-J ..... Panguitch
Hickenlooper, John C. SATC ..... Blackfoot, Idaho
Hill, Almeda ss ..... Franklin, Idaho
Hill, Ethel ss ..... Franklin, Idaho
Hill, Golden R. SATC ..... Franklin, Idaho
Hiskey Daniel R. SATC ..... Salt Lake City
Hite, Benj. S. SATC ..... Salt Lake City
Hogan, Owen M. SATC ..... Thatcher, Idaho
Holland, J. Murdell SATC ..... Rigby, Idaho
Holland, Lester J. SATC ..... Shelley, Idaho
Holley, Francis J. SATC ..... Rexburg, Idaho
Holm, Adelaide J. ss ..... Hyrum
Holman, Grace ss ..... Fountain Green
Holmes, Waldo c-V ..... Montpelier, Idaho
Holt, Gladys ho-So ..... Spanish Fork
Hooper, John C. g-V ..... Hooper
Hoopes Roy H. SATC ..... Salt Lake City
Hopkin, Frank F. SATC ..... Morgan
Hopkin, Jas., V. SATC ..... Croyden
Horsley, Everett L. c-F ..... Soda Springs, Idaho
Horsley, Milton L. SATC ..... Soda Springs, Idaho
Hovey, Leslie W. c-V ..... Millville
Howard, Harry Y. SATC ..... Rexburg, Idaho
Howard, Louise g-Sp ss ..... Huntington
Howard, Zina ss ..... Huntington
Howell, Wesley G. SATC ..... Logan
Hubbard, David S. aema-V ..... Grace, Idaho
Hubbard, Eliza ho-So ..... Willard
Hubbard, Julia V. ho-So ..... Willard
Hubbard, Walter I. SATC ..... Grace, Idaho
Hughes, Ada ss ..... Logan
Humphreys, Asia, ss ..... Logan
Humphrey, Ernest Claude SATC ..... Missoula, Montana
Hunt, Jas. B. SATC ..... Heyburn, Idaho
Huntington, Richard A. SATC ..... Springville
Huntsman, Arthur L. aema-V ..... Ferron
Hurren, Clarence A. ss ..... Hyde Park
Hyatt, Virvinia C. ss ..... Salt Lake City
Hyde, O. Wendell g-V ..... Logan
Isakson, Elmer E. SATC ..... Ogden
Israelson, Eva B. ho-Sp ..... Logan
Israelson, Victor E. a-Sp SATC ..... Logan
Jackson, Dorrell P. a-S ..... Lewiston
Jackson, Jacob W. SATC ..... Rexburg, Idaho
Jacobs Elmo F. SATC ..... Sugar City, Idaho

Jacobs, Helena P. ho-J ..... Rexburg, Idaho
Jacobsen, Lawrence aema-V ..... Logan
Jacques Chas. W. c--F ..... Logan
Jacques, Stanley W. SATC ..... Logan
James, D. Wilmer SATC ..... Paradise
James, Maud, c-V ..... Paradise
James, Richard F. SATC ..... Grand Island, Nebraska
Jamison, Eleanor ss ..... Boise, Idaho
Janke, Eric G. SATC ..... Salt Lake City
Jarvis, Lester A. a-J ..... Salt Lake City
Jenkins, Geo. W. SATC ..... Sandy
Jenkins, Irving J. a-G ..... Hyrum
Jenkins, Leslie M. g-F ss ..... Logan
Jenkins, Lorna ss ..... Ogden
Jenkins, McKinley c-So ..... Malad, Idaho
Jenkins, Paul K. g-F ss ..... Logan
Jenkins, Ralph V. a-V ..... Salt Lake City
Jensen, Adolph ss ..... Ephraim
Jensen, Byron D. aema-V ..... Richfield
Jensen, Caroline Evelyn c-V ..... Logan
Jensen, Delos B. SATC ..... Salt Lake City
Jensen, Evart, J. a-Sp ..... Ephraim
Jensen, J. Golden SATC ..... Rigby, Idaho
Jensen, J. Richard g-F SATC ..... Tremonton
Jensen, LaVerne c-F ..... Brigham
Jensen, Lillian ss ..... Mendon
Jensen, Milton B. g-So ..... Mendon
Jensen, Olive ss ..... Brigham
Jensen, Ray SATC ..... Brigham
Jensen, Ruby ss ..... Manti
Jensen, Sedley W. SATC ..... Trenton
Jensen, Stuard C. aema-V ..... Brigham
Jeppesen, Bartell T. c-V ..... Logan
Jeppesen, Dorothy g-V ..... Logan
Jessop, J. Lyman aema-V ..... Millville
Johansen, Wm. A. SATC ..... Salt Lake City
Johnson, Alta ho-F ..... Grantsville
Johnson, Arvilla ss ..... Logan
Johnson, Albert L. SATC ..... Morgan
Johnson, Clara ss ..... Logan
Johnson, Jos. R. SATC ..... Salt Lake City
Johnson, Madolynn g-F ..... Spanish Fork
Johnson, Naomi M. g-F ss ..... Logan
Johnson, Nephi SATC ..... Logan
Johnson, Ruby J. c-V ..... Logan
Johnson, Simon R. SATC ..... Murray
Johnson, Sytha g-Sp ..... Kanab
Johnson, Wilmirth c-Sp ..... Kanab
Johnston, Walfred E. SATC ..... Idaho Falls, Idaho
Jones, ElRoy S. SATC ..... Enoch
Jones, Eymr E. SATC ..... Ogden
Jones, Hilda B. ss ..... Logan

Jones, Howard T. SATC ..... Sunnyside
Jones, Jos. O. SATC ..... Newton
Jones, LeRoy H. SATC ..... Salt Lake City
Jones, Lewis H. SATC ..... Deweyville
Jones, May ss ..... Wellsville
Jones, Milton T. SATC ..... Malad, Idaho
Jones, Wallace aema-V ..... Heber
Jordan, Ralph B. g-So ..... Bingham Canyon
Jorgensen, Osmond O. SATC ..... Logan
Josephson, Ephraim L. aema-Sp SATC ..... Brigham
Judd, A. Walter aema-V ..... Fredonia, Arizona
Kasius, Andrew W. SATC ..... Ogden
Kearl, Chase a-J ..... Lake Town
Kearl, Isabell ho-V ..... Smithfield
Keller, Calvin SATC ..... Manti
Keller, Chas. H. SATC ..... Logan
Keller, Malvin M. SATC ..... Mink Creek, Idaho
Kendell, Timothy W. SATC ..... Uintah
Kendrich, Harold J. SATC ..... Salt Lake City
Kennedy, Louis J. SATC ..... Ogden
Kenner, R. Lee SATC ..... Manti
Kent, B. Oren SATC ..... Malad, Idaho
Kent, Mary ss ..... Lewiston
Khan, Ameen a-J ..... Teheran, Persia
Khan, Abbas K. aema-F ..... Teheran, Persia
Khan, Allah K. aema-F ..... Teheran, Persia
Khan, S. Jafar a-So ..... Teheran, Persia
Killpack, J. Movell c-V ..... Huntington
Killpack, Maralda g-V ss ..... Ferron
Kimball, Chase g-F ..... Driggs, Idaho
Kimball, Leroy SATC ..... Salt Lake City
King, Glen SATC ..... Escalante
King, Ona J. ho-So ..... Kamas
Kingston, Stella M. ss ..... Morgan
Kirkbride, J. W. ss ..... Smithfield
Kirkham, Martha A. ho-F ..... Lehi
Kirkhuff, Barnice, E. SATC ..... Provo
Kloepfer, Rachel ss ..... Logan
Knudson, Florence ss ..... Brigham
Knudson, Opal, ss ..... Brigham
Koch, Matthias B. SATC ..... Manassa, Colorado
Kohler, Wm. Lewis SATC ..... Salt Lake City
Kossman, Frederick M. SATC ..... Malta, Idaho
Kristofferson, Bjarne R. SATC ..... Ogden
Krumperman, C. Leroy SATC ..... Ogden
Kunz, John S. SATC ..... Bern, Idaho
Kunz, Russell L. SATC ..... Bern, Idaho
Lambourne, Douglas SATC ..... Salt Lake City
Langton, W. Gibbs g-F ..... Logan
Larkin, Wm. R. aema-V ..... Thatcher, Idaho
Larsen, Alvin M. SATC ..... Logan
Larsen, Carl L. SATC ..... Preston, Idaho

Larsen, Ezra Arlen aema-Sp SATC ..... Preston, Idaho
Larsen, Edgar N. ss ..... Manti
Larsen, Estella ss ..... Logan
Larsen, Floyd C. a-V SATC ..... Logan
Larsen, Lelia V. ss ..... Richmond
Larsen, Lewis L. aema-Sp SATC ..... Manti
Larsen, Lloyd A. SATC ..... Salt Lake City
Larsen, Lorrin W. SATC ..... Manti
Larsen, Naomi ho-S ss ..... Logan
Larsen, N. Platt c-V ..... Preston, Idaho
Larsen, Radia P. g-F ..... Preston, Idaho
Larsen, Victor R. g-So ..... Logan
Larsen, W. Urven SATC ..... Rexburg, Idaho
Last, Chas. H. aema-Sp SATC ..... Lewiston
Lau, Heber G. SATC ..... Soda Springs, Idaho
Laub, Emma K. ss ..... Logan
Lawrence, Glen R. SATC ..... Richmond
Leary, John SATC ..... Butte, Montana
Lee, Wylie SATC ..... Idaho Falls, Idaho
Leigh, Caroline ss ..... Cedar City
Leishman, E. Hortense c-V ..... Wellsville
Leishman, Jas. H. SATC ..... Ogden
Leonard, Erin H. SATC ..... Huntington
Leonard, Vaughn C. SATC ..... Huntington
Leven, Geo. J. SATC ..... Central Falls, R. I.
Lewis, Alfred M. SATC ..... Lewiston
Lewis, Doyl M. aema-V ..... Marion
Lewis, Gilbert B. aema-F SATC ..... Marion
Lewis, Jared SATC ..... Logan
Lindquist, Ariel g-G ..... Logan
Lindquist, Gladys ho-V ..... Logan
Lindquist, Milton W. SATC ..... Ogden
Lindsey, Ora E. SATC ..... Moreland, Idaho
Lindsay, Ray c-Sp SATC ..... Ogden
Lindsay, Vernetta g-So ..... Taylorsville
Linford, Chas. H. a-Sp SATC ..... Garland
Linford, Maurice B. a-F ..... Logan
Linford, Wm B. aema-Sp ..... Logan
Little, Anna ss ..... Kanab
Litz, Oka ss ..... Lewiston
Livingston, John C. SATC ..... Moroni
Lloyd, Annie ss ..... Wellsville
Lott, Gerald C. SATC ..... Trenton
Lovelass, Ray E. SATC ..... Provo
Lowder, Ira S. SATC ..... Harrisville
Lowe, Rhea ss ..... Franklin, Idaho
Lowe, Roswell B. SATC ..... Franklin, Idaho
Lowry, Ivy ss ..... Castle Dale
Lund, Nettie ho-Sp ..... Brigham
Lund, Yeppa a-G ..... Logan
Lundstrom, Ethleen I. c-V ss ..... Logan
Lyon, G. Budd SATC ..... Smithfield

McAlister, Harriet g-Sp ss ..... Logan
McAllister, Richard H. SATC ..... Evanston, Wyo.
McAllister, Warrington W. ss ..... Cedar City
McBride, Jas. W. SATC ..... Hyrum
McBride, Wm. W. c-Sp ..... Logan
McCann, Blanche ho-F ss ..... Smithfield
McCornick, Chas B. SATC ..... Idaho Falls, Idaho
McCulloch, Ella ss ..... Logan
McCulloch, J. Alvin c-F SATC ..... Ogden
McCulloch, Maude ss ..... Logan
McCulloch, Roydon K. SATC ..... Salt Lake City
McDonald, Grace ho-J ss ..... Holliday
McDonald, Howard aema-So ..... Logan
McDonald, Jas. E. aema-F ..... Logan
McDonald, Loa S. ho-So ..... Holliday
McDonald, Lyle M. SATC ..... Salina
McDonnell, Thos. Dewey SATC ..... Salt Lake City
McFarland, Blaine A. SATC ..... Ogden
McFarland, Donald B. aema-V ..... Ogden
McFarland, Geo. Q. SATC ..... Ogden
McFarland, W. Glenn SATC ..... Ogden
McKell, Ronald S. SATC ..... Spanish Fork
McKay, Morgan P. a-So ..... Ogden
McKnight, Stanley B. SATC ..... Minersville
McLane, Hugh L., SATC ..... Ogden
McMillan, Donald E., SATC ..... Salt Lake City
McMillan, Glenn, SATC ..... Pocatello, Idaho
McMurdie, Louise, c-V ..... Logan
McMurrin, Gilbert L., SATC ..... Logan
McNeill, Harry E., SATC ..... Ogden
McNiell, Nelson, L., SATC ..... Salt Lake City
McRae, Richard G., SATC ..... Salt Lake City
Mace, Jas. H., SATC ..... Salt Lake City
Mackintosh, Wallace R., SATC ..... Salt Lake City
Madsen, Newel J., g-F ..... Logan
Magleby, Grant W., SATC ..... Monroe
Magleby, John B., SATC ..... Monroe
Magleby, Karl J., SATC ..... Monroe
Magleby, Rulon T., SATC ..... Monroe
Marler, Geo. D., SATC ..... Thornton, Idaho
Marler, Mary, ss ..... Thornton, Idaho
Marshall, Goldwin, SATC ..... Minersville
Marshall, Russell H., SATC ..... Logan
Martin, Clayton A., SATC ..... Payson
Martin, Frank A., SATC ..... San Francisco, California
Martin, Omer, SATC ..... Rexburg, Idaho
Martin, Wm. Thos., SATC ..... Salt Lake City
Martineau, Claire, ss ..... Logan
Mason, LaVon, ho-S ss ..... Willard
Mathews, Edward L., SATC ..... Minersville
Mathias, Oral R., SATC ..... Brigham
Matthews, Elmer, SATC ..... Murray

Matthews, Helma, ho-F.....Oakley, Idaho
Matthews, W. Kenneth, SATC.....Liberty, Idaho
Matson, Gustave A., SATC .....Helper
Maughan, Armenia, ss.....Logan
Maughan, John W., SATC.....Preston, Idaho
Maughan, Jos. S., a-F.....Wellsville
Maughan, Verna, ss.....Wellsville
May, Frank P., SATC.....Lovell, Wyoming
Mecham, Grace, ss.....Morgan
Mecham, Lucian, Jr., a-S ss .....Colonia Juarez, Chih., Mexico
Meder, Fred W., a-Sp.....Tuttle, Okla.
Medford, Theo. M., SATC.....Grace, Idaho
Meeks, Heber, ss.....Kanab
Meikle, W. Lafayette, c-F.....Driggs, Idaho
Mellor, Lester Dee, SATC.....Manti
Mellor, Leslie Lee, SATC.....Manti
Mendenhall, Blanche, ho-So.....Springville
Mendenhall, W. Deal, SATC.....Springville
Merrill, Alford C., SATC.....Richmond
Merrill, Audene, c-V.....Richmond
Merrill, Austin T., SATC.....Preston, Idaho
Merrill, Edna E., g-J.....Logan
Merrill, Effie E., ho-Sp ss.....Logan
Merrill, John C., SATC.....Richmond
Merrill, Loila D., ss.....Logan
Merrill, Loretta E., ss.....Richmond
Merrill, Milton R., a-So.....Logan
Merrill, Oretta D., ss.....Logan
Merrill, Ortencia H., ho-S.....Richmond
Merrill, Wilford, SATC.....Richmond
Merrill, Claud L., SATC.....Bedford, Wyoming
Meuter, Leland C., SATC, ss.....Hyrum
Mickelson, Jas. A., SATC.....Salt Lake City
Mickelsen, Peter, SATC.....Draper
Miles, Maurice K., SATC.....Smithfield
Miller, Byron M., aema-V.....Pegram, Idaho
Miller, Elna, ho-So ss.....Farmington
Miller, Elra J., aema-V.....Hyrum
Miller, Glenn, SATC.....Richfield
Miller, H. Julian, a-J SATC.....Farmington
Miller, Irvin S., g-V.....Logan
Miller, Wm., SATC.....Salina
Miner, Grant C., SATC.....Springville
Miner, Willard, SATC.....Springville
Mitchell, Clarence F., SATC .....Preston, Idaho
Mitchell, Ellis, SATC.....Escalante
Mitchell, Herman F., aema-V.....Logan
Moench, Wilford B., SATC.....Ogden
Mohr, Andrew J., a-J.....Logan
Money, Ann, c-F.....Spanish Fork
Monson, Lafayette, g-F.....Brooklyn, N. Y.
Monter, Lewis J., SATC.....Salt Lake City

Montgomery, Arthur, aema-V.....Ogden
Moody, Edgar R., c-Sp.....Deseret
Moore, Victor W., SATC.....Preston, Idaho
Morehead, Gladwin, c-V ss.....Lago, Idaho
Morgan, N. F., ss.....Logan
Morgan, Samuel, a-S.....Logan
Morris, Carl, SATC.....Ogden
Morris, Laval S., SATC.....Sugar Station
Morrison, Bessie, ho-S.....Brigham
Morrison, Harold R., SATC.....Helper
Morrison, Merlin R., SATC.....Salt Lake City
Morse, Leland W., SATC.....Grand Junction, Colo.
Moser, Erwin U., SATC.....Logan
Moser, Jos. H., SATC.....Bedford, Wyoming
Muir, Verne B., a-V.....Logan
Munk, LaRue, ho-So.....Manti
Munoz, Rafael, c-G.....LaPaz, Bolivia, S. A.
Murdock, Mrs. Sarah, ss.....Lovell, Wyoming
Nagle, Harold E., c-So.....Springville
Napper, Edmund B., c-Sp SATC.....Logan
Nash, Lyn W., g-F.....Preston, Idaho
Nate, C. Russell, SATC.....Dingle, Idaho
Nebeker, A. Hulme, g-J.....Laketown
Nebeker, DeWayne, SATC.....Richfield
Nebeker, Sidney J., a-F.....Laketown
Neddo, Geo. W., aema-V.....Providence
Neeley, Herschel M., SATC.....Preston, Idaho
Nelson, Esther E., ss.....Logan
Nelson, Hazel, ho-F.....Logan
Nelson, Etta, ss.....Logan
Nelson, Ida, ho-F.....Eagar, Arizona
Nelson, Lola S., g-F.....Preston, Idaho
Nelson, Parley L., SATC.....Richmond
Nelson, Vern, aema-V.....Preston, Idaho
Nelson, Wm. Jos., SATC.....Draper
Nethercott, Henry W., SATC.....Salt Lake City
Newenswander, Arthur J., SATC.....Weston, Idaho
Nibley, Chas. W., III, a-Sp.....Logan
Nichols, Harry W., SATC.....Salt Lake City
Nielsen, Alma E., SATC.....Afton, Wyoming
Nielsen, Chas. H., aema-V.....Hyrum
Nielsen, Leo H., c-Sp SATC.....Union, Oregon
Nielsen, Niels P., g-S.....Millville
Nielsen, Myrtle, ss.....Logan
Nielsen, Vera E., ss.....Logan
Nielsen, Wilford W., SATC.....Afton, Wyo.
Nielsen, Alfred C., SATC.....Murray
Nielsen, Clayton C., SATC.....Hyde Park
Nielsen, Glenn Z., SATC.....Axtell
Nielsen, Morgan E., SATC.....Monroe
Nolen, R. Edgar, SATC.....Caldwell, Idaho
Nord, Eric S., aema-V.....Salt Lake City

Norman, Henry, aema-V.....Paradise
Norman, Wm., SATC.....Logan
Norr, Vernon M., SATC.....Logan
Norris, Benj., SATC.....Ogden
Novak, Jos., SATC.....Magna
Nuffer, Louis F., a-G.....Logan
Nuffer, Myron D., SATC.....Preston, Idaho
Nuffer, Raymond, SATC.....Preston, Idaho
Oberhansly, Flora, ss.....Colonia Juarez, Mexico
Oberhansley, Pearl, g-So.....Payson
Oborn, Lillie ss.....Ogden
Oborn, Verna ss.....Ogden
Oilver, Ethelyn, ss.....Sandy
Olsen, D. Lamar, SATC.....Emery
Olsen, Einar B., c-So SATC.....Logan
Olsen, Elva, c-V.....Logan
Olsen, Geo. D., SATC.....Spokane, Washington
Olsen, Grace, ss.....Marion
Olsen, Harry J., a-S.....Millville
Olson, Cora, ss.....Smithfield
Olson, Esther, ss.....Logan
Olson, Hortense, ss.....Bear River City
Olsen, J. Perry, SATC.....Manti
Olsen, John F., ss.....Kamas
Olsen, Lillie, c-V.....Logan
Olsen, W. Carlyle, aema-V.....Ovid, Idaho
Olsen, Pearl, ss.....Smithfield
Omer, Otto P., SATC.....Salt Lake City
Orme, John A., g-V.....Nephi
Orme, P. Pratt, aema-V.....Ashton, Idaho
Osmond, Alfred Wendell, SATC.....Provo
Osmond, I. Fern, c-Sp.....Logan
Osmond, Ruby H., ho-S ss.....Logan
Oswald, Jas. B., SATC.....Salt Lake City
Otterstrom, Jos. H., SATC.....Cleveland
Ottosen, Dewey H., SATC.....Manti
Owen, Daniel H., c-F.....Logan
Owen, F. Vern, a-Sp SATC.....Peterson
Owen, J. Wallace, SATC.....Juniper, Idaho
Pace, Alta, ho-V.....Loa
Packer, Vera E., c-V.....Logan
Page, H. Tracy, SATC.....Salt Lake City
Paice, Caleb E., ss.....Beaver
Painter, Mark H., SATC.....Logan
Palmer, Chas. V., SATC.....Rexburg, Idaho
Palmer, Jas. T., SATC.....Morgan
Palmer, W. Wendell, SATC.....Malad, Idaho
Parissenti, Albino J., SATC.....Lark
Parkinson, E. Ben., ss.....Logan
Parkinson, Glenn S., aema-G.....Logan
Parkinson, Karma, ho-S.....Logan

Parkinson, Maurice, a-F ..... Wellsville
Parkinson, Myrtle A., c-F ..... Logan
Parkinson, Wallace B., g-F ..... Logan
Parry, Mabel C., ss ..... Logan
Parry, Mary M., g-F ..... Salt Lake City
Parry, V. Frank, SATC ..... Ogden
Paulson, Signe, ho-F ..... Park City
Peacock, Wilbur, SATC ..... Emery
Pearson, Ellwood S., SATC ..... Ogden
Pedersen, Marie, g-F ..... Logan
Pedersen, Willard M., SATC ..... Salt Lake City
Pendrey, W. Scott, aema-V ..... Montpelier, Idaho
Perkins, Mary, ss ..... Wellsville
Perkins, W. Wendell, SATC ..... Gunnison
Perrett, Herbert J., SATC ..... Salt Lake City
Perry, H. Eugene, SATC ..... Brigham
Perry, P. Weston, SATC ..... Salt Lake City
Peterman, Albert M., aema-V ..... Logan
Peterman, Donald F., SATC ..... Logan
Peterson, Albert J., SATC ..... Salt Lake City
Peterson, Carl W., a-S ..... Logan
Petersen, Carrol Delmont, SATC ..... Hyrum
Petersen, Dewey L., SATC ..... Eden
Peterson, Esther, ho-V ..... Chandler, Arizona
Peterson, Grace, ho-So ..... Manti
Petersen, Jesse, aema-V ..... Hyrum
Petersen, Laurene, ss ..... Hyrum
Petersen, Lorenzo E., SATC ..... Ferron
Peterson, Maurine, g-J ..... Logan
Peterson, Merrill, a-F SATC ..... Logan
Peterson, Rebecca, ss ..... Mink Creek, Idaho
Peterson, Wm. O., g-S ss SATC ..... Logan
Phelps, Harold E., SATC ..... Salt Lake City
Phelps, Ward R., SATC ..... Fillmore
Phillips, Ida, ss ..... Lehi
Picot, Stanley A., c-V SATC ..... Logan
Pieper, Frederick W., SATC ..... Rexburg, Idaho
Pierce, Richard K., SATC ..... Ogden
Pierce, Zereta, ho-F ..... El Paso, Texas
Pihl, Walter C., SATC ..... Murray
Pixton, Emma S., ho-V ..... Logan
Pixton, Ephraim, SATC ..... Murray
Pixton, Robert L., a-So ..... Logan
Platt, Ben, Jr., SATC ..... Woods Cross
Playter, Philip J., SATC ..... Salt Lake City
Plowman, Ada, ss ..... Smithfield
Pond, Mary, ss ..... Lewiston
Poole, Leslie E., SATC ..... Rexburg, Idaho
Porter, Iona C., c-V ..... Preston, Idaho
Porter, Melvin, SATC ..... Franklin, Idaho
Porter, Vivian E., ss ..... Logan

Porter, Wilford D., g-F SATC.....Franklin, Idaho
Potter, David B., c-F.....Price
Potter, Elwin A., SATC.....Bancroft, Idaho
Poulsen, Andrew M., SATC.....Ogden
Poulsen, Jas. L., aema-V.....Logan
Poulsen, Oleta, ho-S.....Brigham
Poulter, Lillino, ss.....Logan
Poulter, Wm. Irvin, a-S.....Logan
Poutlon, Earl P., SATC.....Salt Lake City
Powell, Carl L., SATC.....Ogden
Pratt, Harold W., SATC.....Colonia Dublan, Mexico
Pratt, Orson S., a-Sp.....Salt Lake City
Prescott, E. Stanley L., c-S.....Sidney, Australia
Preshaw, Earl A., SATC.....Ogden
Preston, Marion S., g-S ss.....Logan
Preston, Mabel S., ss.....Logan
Price, Albert, aema-V.....Malad, Idaho
Price, Albert E., SATC.....Salt Lake City
Price, Ardath L., a-Sp.....Provo
Price, Larkin, ss.....Driggs, Idaho
Price, Maude, g-F.....Logan
Price, Rudger N., SATC.....Oakley, Idaho
Pugh, Elizabeth, ho-F.....Kanab
Pullan, Robert E., SATC.....Salt Lake City
Radmall, Millen D., SATC.....Pleasant Grove
Rainey, Alta, ss.....Freedom, Wyoming
Rallison, R. Leo, a-So.....Preston, Idaho
Ramsperger, Albert G., g-F.....Logan
Remsperger, Helena, g-So.....Logan
Ramsperger, Herman C., a-S.....Logan
Rasmussen, Christian V., SATC.....Salt Lake City
Rath, Geo., SATC.....Salt Lake City
Redford Ida, c-V.....Logan
Redford, Ruby L., ho-V.....Logan
Reece, Jennie A., ho-F.....Payson
Reed, Joseph, a-J.....Salt Lake City
Reeder, Roscoe S., SATC.....Ogden
Rees, Ruth, ss.....Garfield
Reese, Edgar L. SATC.....Rexburg, Idaho
Reese, Frederick M., SATC.....Salt Lake City
Reese, Leslie E., SATC.....Payson
Reese, Ralph, SATC.....Idaho Falls, Idaho
Reid, Elma, g-F ss.....Preston, Idaho
Reid, Robert L., SATC.....Fayette
Rencher, J. Grant, aema-V.....Swan Lake Idaho
Reynolds, Evan F. aema-V.....Logan
Reynolds Earl W., SATC.....Springville
Reynolds, Geo. Gordan, SATC.....Salt Lake City
Rice, Inez, ss.....Logan
Rice, Oscar L., SATC.....Logan
Rich, C. O'Neal, SATC.....Paris, Idaho
Rich, Geneva, g-So.....Logan

Rich, Irene, ho-J ..... Logan
Rich, Juanita, ss ..... Logan
Rich, Letty, g-F ss ..... Logan
Rich, Spencer, aema-V ..... t ..... Paris, Idaho
Rich, Stanford E., SATC ..... St. Charles, Idaho
Richards, Franklin D., SATC ..... Salt Lake City
Richard, Fred A., SATC ..... Malad, Idaho
Richards, Frank, a-F ..... Farmington
Richards, Iva L., g-Sp ss ..... Logan
Richards, M. Alta, g-Sp ss ..... Logan
Richardson, Belle, g-Sp ..... Fruita
Richardson, Fontella, g-V ..... Fruita
Richardson, Rufus D., aema-F SATC ..... Francis
Riches, Jos. C., SATC ..... Salt Lake City
Ricks, John A., SATC ..... Logan
Ricks, Paul, SATC, ss ..... Logan
Riddle, Alfred L., SATC ..... Escalante
Riggs, Rae, ho-Sp ..... Kanab
Rigby, Orpha, ss ..... Newton
Rigoni, Orlando J., SATC ..... Lofgreen
Riley, Frederick, SATC ..... Bountiful
Rinderknect, Anna, ss ..... Providence
Rindlisbaker, John, aema-V ..... Logan
Rinshed, Wm. E., SATC ..... Salt Lake City
Ririe, Boyd, g-V ..... Lewiston
Riter, Samuel W., g-Sp ..... Logan
Riter, Wm. E., a-F SATC ..... Logan
Roberts, Clarence B., g-F ..... Logan
Roberts, John Leo, g-Sp ..... Malad, Idaho
Robertson, John D., SATC ..... Blackfoot
Robinson, D. Earle, c-G ..... Logan
Robinson, Eugene W., a-Sp SATC ..... Salt Lake City
Robinson, Geo. W., SATC ..... Ucon, Idaho
Robinson, Harriet, ho-F ..... Kanab
Robinson, J. Elmo, SATC ..... El Paso, Texas
Robinson, Jos. L., g-F SATC ..... Logan
Robinson, Vernon, a-V ..... Laketown
Robison, Delbert S., SATC ..... Morgan
Robison, G. A., a-Sp ..... Hinckley
Robison, M. Dorwin, SATC ..... Logan
Robson, Ralph, a-V ..... Ogden
Rogers, Geo. L., aema-V ..... Logan
Rogers, Lucile P., g-S ss ..... Logan
Rogers, Thayne, g-V ..... Salt Lake City
Rogers, Wm. A., SATC ..... Ogden
Rolfsen, Henry M. SATC ..... Hyrum
Romney, Douglas P., SATC ..... Rexburg, Idaho
Romney, Gaskell M., SATC ..... Rexburg, Idaho
Romney, Gordon, SATC ..... Colonia Juarez, Mexico
Roos, Thone L., SATC ..... Idaho Falls, Idaho
Rose, Edgar L., SATC ..... Pocatello, Idaho
Rosengreen, Enid J., g-S ss ..... Logan

Rosenbreen, Ruby L., c-V.....Logan
Roskelley, Edith, ss.....Smithfield
Roszell, Glenn L., SATC.....Twin Falls, Idaho
Roundy, Emil L., aema-V.....Escalante
Rowberry, Edward O., SATC.....Rexburg, Idaho
Rowberry, Ralph, SATC.....Rexburg, Idaho
Roylance, Darwin T., SATC.....Springville
Rozsa, Varnell R., SATC.....Logan
Ruff, Enid, ss.....Logan
Rumel, John Henry, SATC.....Salt Lake City
Rushton, Clyde W., SATC.....Iona, Idaho
Russell, Alexander N., SATC.....Salt Lake City
Russell, Geo. E., aema-Sp SATC.....Springville
Ruud, Kathryn, c-V.....Logan
Salin, Edward, SATC.....Salt Lake City
Salisbury, Frank, Jr., SATC.....Springville
Salisbury, Wilford G., aema-V.....Logan
Saltzgiven, Ray B., c-V.....Logan
Sams, Sherman B., SATC.....Minneapolis, Kansas
Sanborn, Harold G., SATC.....Salt Lake City
Sandstrom, Carol W., SATC.....Ogden
Sandstrom, Lewis E., SATC.....Idaho Falls, Idaho
Sanson, Clyde C., SATC.....Murray
Sanford, Ralph B., aema-F.....Delta
Sauls, Kiefer B., a-J.....Storrs
Sargent, Hugh A., SATC.....Monroe
Sasaki, Hosaku, a-Sp.....Japan
Saxer, Beatrice, ho-Sp.....Logan
Scarborough, L. F., aema.....Franklin, Idaho
Schelin, Clarence M., SATC.....Ogden
Schofield, Holly, SATC.....Spring City
Scholes, Francis E., SATC.....Park City
Schroeder, Adolph E., a-Sp.....Helendale, Fla.
Schwan, Gilbert E., SATC.....Murray
Scorup, Edna, ss.....Provo
Searle, R. Marion, SATC.....Provo
Seeley, Bertha, ho-F.....Castle Dale
Seeley, Bertrude, c-F.....Castle Dale
Seeley, Jennie, ho-F.....Castle Dale
Sevey, Pauline, ho-F.....Panguitch
Seymour, Eunice, ho-F.....Oakley
Sharp, Lavon B., g-G.....Salt Lake City
Shaw, Bessie H., ss.....Logan
Shaw, Emma, ss.....Hyrum
Shaw, MaRee, ho-V.....Paradise
Shaw, Mary A., ss.....Logan
Shelton, Edgar G., SATC.....Soda Springs, Idaho
Shepherd, Earl, SATC.....Paris, Idaho
Shepherd, Rulon T., SATC.....Paris
Sherman, Wm. F., SATC.....Ogden
Shinney, Harry R., SATC.....Ogden

Short, Edgar D., SATC.....Salt Lake City
Shumway, John F., SATC.....Kansas City, Mo.
Shurtleff, Horace W., SATC.....Ogden
Shurtliff, Harvey T., SATC.....Evanston, Wyo.
Shurtliff, Orla C., a-F SATC.....Lewisville, Idaho
Silver Eleanor F., g-F.....Ogden
Silvers, Ray J., a-So.....Salt Lake City
Simmonds, Ruby R., ss.....Trenton
Simmons, Dora, ss.....Ucon, Idaho
Simonsen, Harris B., c-Sp SATC.....Emery
Simpson, Robert D., g-V SATC.....Logan
Skaggs, L. Juston, SATC.....Ogden
Skanchy, Lillian, ss.....Logan
Skanchy, Verna, ss.....Logan
Skidmore, Albert L., SATC.....Benmore
Slaugh, Kimball G., SATC.....Vernal
Smart, Nellie B., c-V.....Logan
Smart, Thos. L., a-Sp.....Logan
Smith, Abbie, g-F.....Logan
Smith, Bertram, W., g-F SATC.....Logan
Smith, Beulah E., c-V.....Providence
Smith, Calvin, aema-V SATC.....Logan
Smith, David W., ss.....Eureka
Smith, Driver E., c-V.....Logan
Smith, Edwin E., a-V SATC.....Ogden
Smith, Elmer C., g-Sp SATC.....Logan
Smith, Fred W., SATC.....Ogden
Smith, Gwendolyn, g-F.....Franklin, Idaho
Smith, Jas. N aema-V.....Logan
Smith, Jos. L., SATC.....Sandy
Smith, Lapriel, g-V.....Logan
Smith, LeGrand F., SATC.....Draper
Smith, Margaret Iva, ho-S.....Logan
Smith, Mary W., g-F.....Logan
Smith, Nephi P., SATC.....Rexburg, Idaho
Smith, Olena W., ho-S.....Logan
Smith, Neil F., SATC.....Salt Lake City
Smith, Oliver C., SATC.....American Fork
Smith, Percy E., SATC.....Logan
Smith, Rachel Irene, ho-S ss.....Logan
Smith, Ralph A., g-Sp.....Logan
Smith, Roland B., SATC.....Clearfield
Smith, Rulon, c-V.....Logan
Smith, Sidney S., SATC.....Wanship
Smith, Vella B., ho-F.....Logan
Smith, Welland F., SATC.....Preston, Idaho
Smith, Willis M., c-V.....Smithfield
Smith, Winnifred G., ho-S.....Beaver
Smout, Wm. J., SATC.....Ogden
Smurthwaite, Margaret E., ss.....Wellsville
Snow, Rulon M., SATC.....Cleveland
Snow, Wm. J., c-So.....Richfield

Soelberg, Lloyd L., SATC.....Idaho Falls, Idaho
Solomon, Leah ho-S .....Salt Lake City
Sorensen, Chas. J., a-G ss.....Logan
Sorensen, Howard D., SATC.....Ogden
Southwick, Edward W., SATC .....Lehi
Spande, Mabel V., g-Sp.....Logan
Spande, Sybil E., ho-So ss.....Logan
Spencer, Bessie, ho-Sp.....Kanab
Spencer, Clifford, SATC.....Evanston, Wyo.
Spencer, Howard H., SATC .....Evanston, Wyo.
Spencer, J. Lester, SATC.....Escalante
Sperry, Ruth, c-F.....Nephi
Spillman, F. Lyman, SATC.....Anaconda, Mont.
Squires, George, aema-V.....Manti
Squires, Homer W., SATC.....Chicago, Ill.
Staley, Clyde Y., SATC.....Ogden
Staley, S. Grant, aema-V.....Montpelier, Idaho
Stalker, Dwight F., SATC.....St. Anthony, Idaho
Standing, Arnold R., SATC .....Honeyville
Starley, Wells P., SATC.....Fillmore
Steffen, Conrad R., SATC.....Brigham
Steffen, Ernest, SATC .....Brigham
Steglich, Fred P., SATC.....Salt Lake City
Stein, John E., SATC.....Provo
Steiner, Christian D., a-G.....Salt Lake City
Steiner, Herman, aema-V.....Logan
Steiner, W. J., aema-V.....Logan
Stephens, Fayette E., a-G .....Victor, Idaho
Stevens, Kenneth R., SATC.....Ferron
Stevens, Leland H., SATC.....Salt Lake City
Stevens, Mead W., SATC.....Oakley
Stevenson, Clifford A., aema-F.....Logan
Stevenson, Jos. E., aema-V.....Layton
Stevenson, Sadie B., c-V.....Logan
Stewart, Albert B., SATC.....Meadow
Stewart, Bessie, c-Sp .....Logan
Stewart, Ella, ss .....Ogden
Stewart, J. B., aema-V.....Lehi
Stewart, Lowell, J., SATC.....Pocatello
Stewart, Ross, a-V.....Tooele
Stewart, Wynona B., g-Sp .....Logan
Stockdale, Leland, SATC.....Franklin, Idaho
Stocking, Revert C., SATC.....Burley
Stoddard, Howard J., c-F .....LaGrande, Oregon
Stoddard, Verner L., SATC.....St. Anthony, Idaho
Stone, Mattie, ss .....Ogden
Stoney, Clyde F., SATC.....Logan
Stookey, Bernice J., ho-S.....Clover
Stookey, Enos A., a-F.....Clover
Stookey, Lincoln A., aema-V .....Clover
Storey, Mark, SATC.....Ogden

Storrs, Norven L., a-Sp.....American Fork
Stowell, Caseel, ss .....Logan
Stratford, C. Conway, SATC.....Pocatello
Stringham, J. Grant, SATC.....Salt Lake City
Struve, L. Christian, SATC.....Preston, Idaho
Stuart, Lafayette, SATC.....Salt Lake City
Stucki, Leona, ho-V.....Santa Clara
Sumsion, Glen W., STAC.....Springville
Swainston, Janet T., ss.....Preston, Idaho
Swartfager, Vernon W., SATC.....Ogden
Swenson, Carl A., SATC .....Salt Lake City
Swetin, Joseph, a-V.....Gunnison
Swetin, Zlata, ho-V.....Philadelphia, Pa.
Swift, Earl D., SATC.....Salt Lake City
Taggart, C. J., SATC.....Ogden
Taggart, Hasuel S., SATC.....Morgan
Taggart, Warren J., SATC.....Lewiston
Taylor, Arthur C., aema-V.....Loa
Taylor, Jennie B., ho-S.....Lehi
Taylor, Lawrence I., SATC.....Rigby, Idaho
Taylor, T. Merrill, aema-V.....Parowan
Tennant, Margaret E., ho-F.....Bingham
Thain, Geo. W., c-Sp.....Logan
Thain, M. Aldyth, g-S.....Logan
Thatcher, Eulalia, g-V .....Logan
Thatcher, Hanna, g-So.....Logan
Thatcher, Helen, ho-S ss.....Logan
Thatcher, Kenneth, g-V.....Logan
Thatcher, Leora, ss.....Logan
Thatcher, Martha, g-V ss.....Logan
Theurer, Leone, ss .....Providence
Thomas, Ben R., SATC.....Pocatello, Idaho
Thomas, Evangeline, g-Sp .....Salt Lake City
Thomas, J. Glen, SATC.....Spanish Fork
Thomas, Jos. A., SATC.....Salt Lake City
Thomas, Kate, g-S.....Malad, Idaho
Thomas, Owen B., SATC.....Logan
Thomas, Theodore W., SATC.....Price
Thomas, V. Geneva, g-So.....Logan
Thomas, Wm. B., c-V .....Logan
Thomas, Wm. E., SATC.....Sugar City, Idaho
Thomas, Wm. W., SATC.....Malad, Idaho
Thompson, Amos K., SATC.....Rexburg, Idaho
Thompson, Carter S., aema-V.....Hyrum
Thompson, Carter S., SATC.....Plain City
Thompson, John H., SATC.....Salt Lake City
Thomson, Jessie, ss.....Salt Lake City
Thornburg, Chauncey, SATC.....Salt Lake City
Thornley, Wilson R., SATC.....Smithfield
Thorpe, S. Lovern, SATC .....Soda Springs, Idaho
Timpson, Alonzo B., SATC.....Murray

Tingey, Delmar C., a-F.....Brigham
Tippetts, John R., ss.....Logan
Tolman, Austin S., g-Sp.....Honeyville
Tolman, Nathan, ss.....Honeyville
Tracy, Stanley J., SATC.....Ogden
Tracy, Thos. J., SATC.....Ogden
Treseder, Lee G., c-Sp.....Ogden
Trullinger, Elenora, ho-J.....Altamont, Ill.
Tucker, Guy C., aema-V SATC.....Fairview
Turley, E. Vernon, SATC.....Colonia Juarez, Chi., Mexico
Turner, Edward P., SATC.....Morgan
Turner, Lee C., SATC.....Logan
Tuttle, Laura J., ss.....Manti
Unander, Jos. R., SATC.....Ogden
Urie, Fannie E., ss.....Park City
Vandernberg, Richard, SATC.....Ogden
Vaughn, Robt. J., SATC.....Pocatello, Idaho
Verniew, John G., SATC.....Ogden
Vernon, Aldyth, g-Sp.....Logan
Vernon, Lais, g-Sp ss.....Logan
Vincent, Lorenzo P., SATC.....Salt Lake City
Vogler, Clara G., ho-V.....Milwaukee, Wis.
VonHake, P. Clarence, SATC.....Salt Lake City
Vowles, Albert O., SATC.....Tooele
Wach, Fred, SATC.....Collinston
Wadsworth, Rachel, ss.....Logan
Wagstaff, Annie E., ho-V.....Preston, Idaho
Wakefield, Robt. B., SATC.....Huntington
Walc, Leopold E., SATC.....Ogden
Waldron, Walter B., SATC.....Morgan
Walker, Percy P., SATC.....Salt Lake City
Walters, Orrin S., aema-V.....Rexburg, Idaho
Ward, Geo. A., c-S.....Willard
Warden, Jas., Jr., SATC.....Salt Lake City
Warner, Adella, g-So.....Ogden
Warner, Dorus K., SATC.....Grace, Idaho
Watkins, David C., a-Sp SATC.....Brigham
Watkins, Eugene P., SATC.....Brigham
Watts, Howard E., SATC.....Ogden
Wayman, Wallace R., aema-J.....Logan
Webb, Alta, ho-F.....Richmond
Webb, Jos. E., c-S.....Richmond
Welch, Albert C., SATC.....Morgan
Welch, Florence, ss.....Paradise
Welch, Wilford W., a-Sp.....Paradise
Wells, Geneva, ho-J.....Oak City
West, Alva K., SATC.....Logan
West, Lawrence M., SATC.....Ogden
Wheat, Rue H., SATC.....Ogden
Whetten, Henry A., c-V.....Colonia Juarez, Chih., Mexico
White, Azmon D., aema-S.....Beaver

White, Edna, ho-S.....Beaver
White, Luela, ss.....Beaver
Whitehead, Alvin M., c-F.....Bench, Idaho
Whitehead, Francis B., SATC.....Bench, Idaho
Whitehead, Melvin M., c-F.....Bench
Whitney, Burns, aema-V.....Ridgedale, Idaho
Whitney, Roscoe M., g-F SATC.....Logan
Whittaker, Esdras, SATC.....Ogden
Whittington, Jas. G., SATC.....Logan
Wilcox, Sidney S., SATC.....Ogden
Wilde, Teresa, ho-V.....Logan
Wilhelm, Albert R., SATC.....Twin Falls, Idaho
Wilkes, Wm. E., SATC.....Bedford, Wyo.
Wilkinson, David Ray, SATC.....Ogden
Wilkinson, Lyle E., c-Sp.....Ogden
Willes, Jos. A., SATC.....Inkom, Idaho
Willes, Jos. S., SATC.....Salt Lake City
Williams, Arnold, SATC.....Salt Lake City
Williams, Anna, ho-V.....Malad, Idaho
Williams, Clark, aema-V.....Hyrum
Williams, Gwyn, ss.....Ogden
Williams, Howell M., a-S.....Logan
Williams, LaVon, aema-V.....Hyrum
Williams, Thos. P., SATC.....Ogden
Williams, Vivian R., aema-V.....Farmington
Willie, Vernal H., g-Sp.....Mendon
Willoughby, Alfred R., SATC.....Salt Lake City
Willoughby, Parley E., aema-V.....Salt Lake City
Wilson, Angus B., SATC.....Pleasant Grove
Wilson, Jesse T., c-S.....Hyrum
Wilson, Jos. F., SATC.....Salt Lake City
Wilson, Marion L., a-V.....Salt Lake City
Wilson, Milton T., SATC.....Logan
Wilson, Vanez T., aema-S.....Logan
Wilson, Wm. W., SATC.....Ogden
Winkler, Aurel P., SATC.....Mt. Pleasant
Winn, E. Lorus, SATC.....Ephraim
Winschell, Louise L., ss.....Logan
Winsor, Rulon S., aema-V.....Enterprise
Winters, Elwood G., SATC.....Garland
Winzeler, Edward O., SATC.....Tremonton
Winzeler, Elmer R., SATC.....Tremonton
Witbeck, Martie V., SATC.....Gunnison
Wolf, David, SATC.....Owenton, Ky.
Wood, Cassie, ss.....Logan
Wood, Catherine, g-V.....Logan
Wood, Dora, ss.....Trenton
Wood, John H., SATC.....Woods Cross
Wood, Rella L., ho-F.....Willard
Woodmansee, Carl M., SATC.....Rexburg, Idaho
Woodruff, Eunice, c-Sp.....Smithfield

Woods, Foster F., SATC.....Salt Lake City
Woodside, T. Clyde, c-V.....Logan
Woodward, Ernest B., aema-F SATC.....Wellsville
Woodward, Grant T., a-F.....Franklin, Idaho
Woodward, Harold S., SATC.....Shelley, Idaho
Woodworth, Ira A., SATC.....Fairview, Idaho
Woolsey, Parley, a-G.....Blanding
Woolston, Della, ho-So.....Lehi
Worley, J. Clyde, g-F.....Logan
Worthen, Geo. W., SATC.....Rexburg, Idaho
Wrathall, Penina, ho-F.....Grantsville
Wright, Arnold, SATC.....Blackfoot, Idaho
Wright, Ellis, Leland, SATC.....Thatcher, Idaho
Wright Eugene M., SATC.....Idaho Falls, Idaho
Wright, Geo. S., SATC.....Idaho Falls, Idaho
Wright, Heber C., SATC.....Spring City
Wright, Jack B., g-V.....Ogden
Wright, Ray R., SATC.....Milburne, Wyo.
Wyatt, Elizabeth, ss.....Wellsville
Wyatt, Lloyd B., SATC.....Salt Lake City
Wyatt, Wilbur R., SATC.....Tremonton
Wyatt, Wm. L., SATC.....Wellsville
Wyllie, Donald D., SATC.....Green River
Young, Brigham H., SATC.....Salt Lake City
Young, Brigham R., SATC.....Idaho Falls, Idaho
Young, Hyrum C., SATC.....Salt Lake City
Young, Stella, ho-S ss.....Logan
Young, Cora, ss.....Idaho Falls, Idaho
Young, Lena, ss.....Idaho Falls, Idaho
Young, Myrle, ss.....Brigham
Zabriskie, A. Vard, c-So SATC.....Eureka
Ziebarth, John A., a-F.....Pocatello, Idaho
Zimmerman, Theodore H., SATC.....American Falls, Idaho

JUNIOR EXTENSION SHORT COURSE, LOGAN, UTAH.

Anderson, Rachel.....Lehi
Bailey, Evelyn.....Nephi
Bailey, Naomi.....Nephi
Barber, Mary.....Layton
Bates, Lila.....Kanesville
Beazer, Mark.....Layton
Beckstrand, Grant B.....Meadow
Birch, Leah.....Hoytsville
Bohman, Alfred.....Peterson
Brown, Jerome.....Payson
Brymer, Lillias.....Price
Buchanan, Mary.....Richfield
Butler, Albert.....Spring Lake
Butler, Ray.....Payson
Chapman, Nellie.....Heber

Christensen, Angus ..... Salem
Christensen, F. N. ..... Gunnison
Clark, Ethel ..... Hyde Park
Clark, Ray ..... Coalville
Clawson, Leslie ..... Providence
Clegg, Rue ..... Heber
Cloward, Ora ..... Monroe
Clyde, Harry ..... Springville
Cornaby, Leslie ..... Spanish Fork
Cornwall, Sidney ..... Salt Lake City
Creer, Ruth ..... Spanish Fork
Crook, Royal ..... Heber
Cuttler, Retta ..... Payson
Day, Harmon ..... Draper
Day, Joseph ..... Layton
Eggertsen, Anna ..... Provo
Ence, Dwane ..... Richfield
Fisher, Golden ..... Hooper
Forsgren, Hazel ..... Brigham
Frost, Geneva ..... Oakley
Funk, Claudia ..... Richmond
Gailey, Marlin ..... Layton
Gardner, Bertrand ..... Sandy
Gardner, Beulah ..... Spanish Fork
Garrett, Glenn ..... Nephi
Greenwood, Grace ..... Sandy
Gribble, J. W. ..... Salem
Halverson, Reed ..... Spanish Fork
Hamilton, Norma ..... Riverton
Hansen, Elsie ..... Syracuse
Holmes, LaMar ..... Salem
Holt, Genevieve ..... Hooper
Humphries, Floyd ..... Tooele
Irons, Mildred ..... Moroni
Jensen, Lillian ..... Mendon
Jensen, Marv ..... Gunnison
Jessop, Beatrice ..... Millville
Johnson, McCoy ..... Grantsville
Kelly, Geneva ..... Fillmore
Kent, Mary ..... Lewiston
King, Eliza L. ..... N. Logan
Kirk, Annie ..... Pleasant Grove
Knowles, Willard ..... Logan
Larsen, Edna ..... Richmond
Larsen, Leona ..... Spring City
Lemon, Melvin ..... Paradise
Lewis, D. M. ..... Marion
Lofgren, Lee ..... Huntsville
Lofgreen, Verna ..... Huntsville
Loveless, Glenn L. ..... Payson
Madsen, Evan ..... Mt. Pleasant

Marrott, Deane ..... Pleasant Grove
Merrill, LaVille ..... Richmond
Moore, Huish ..... Payson
Morrell, Eugene ..... Tridell
Nalder, Claude ..... Layton
Nalder, Vera ..... Layton
Nelson, Glen ..... Sunnyside
Nelson, Lyle ..... Provo
Nelson, Rulon ..... Spanish Fork
Orme, Sarah ..... Tooele
Page, Harold ..... Hooper
Peck, Bernice ..... Grantsville
Peterson, Beatrice ..... Salina
Peterson, Carrol D ..... Hyrum
Peterson, Viola ..... Smithfield
Porter, Veda ..... Morgan
Poulter, Lenore ..... Logan
Powell, Dean ..... Lehi
Rampton, Mary ..... Layton
Rawsten, Betty ..... Clarkston
Reece, Sterling ..... Payson
Rigby, Orphah ..... Newton
Rees, Oneita ..... Nephi
Roberts, Arville ..... Layton
Roberts, Mrs. F. J. ..... Ogden
Roberts, Rufus ..... Spanish Fork
Roylance, Helen ..... Springville
Seeley, Jennie ..... Castledale
Shaw, MaRee ..... Paradise
Siegfried, Joshua ..... Bear River City
Smith, Glenn ..... Murray
Snow, Leroy ..... Provo
Steed, Joseph ..... Layton
Thurgood, Louisa ..... Hooper
Walker, Floyd ..... Pleasant Grove
Walker, Nora ..... Syracuse
Walker, Zola ..... Pleasant Grove
Walton, Olive ..... Monticello
Weeks, Lorin ..... Pleasant Grove
Whiting, Lorna ..... Springville
Willey, Verna ..... Syracuse
Williams, Erda ..... Murray
Williams, E. L. ..... Wellsville
Wood, Earl ..... Monticello
Wood, Grace ..... Trenton
Young, Karl ..... Provo

JUNIOR EXTENSION SHORT COURSE, CEDAR CITY, UT.

Baker, Lois ..... Minersville, Ut.
Bennett, Erle ..... Parowan, Ut.

Clark, Commodore.....Cedar City, Ut.
Cattrell, Della .....Cedar City, Ut.
Dalley, Orien .....Cedar City, Ut.
Dalton, Myra .....Parowan, Ut.
Gospill, Howard .....Milford, Ut.
Froyd, Fern .....Cedar City, Ut.
Hallingshead, Leo.....Minersville, Ut.
Harmon, Alice .....St. George, Ut.
Houston, D. C. .....Panguitch, Ut.
Miller, Marian .....Panguitch, Ut.
Morric, R. A. .....St. George, Ut.
Wood, Pauline .....Cedar City, Ut.

SUMMARY OF ATTENDANCE, 1918-19.

	Agriculture (Men)	Ag'l. Eng., Mech. Arts (Men)	Commerce (Men)	Commerce (Women)	General Science (Men)	General Science (Women)	Home Economics (Women)	TOTAL	GRAND TOTAL
COLLEGE:									
Graduates	11	1	2	...	4	1	...	19	
Seniors	8	2	8	...	4	7	21	50	
Juniors	11	2	3	...	3	5	9	33	
Sophomores	7	2	6	1	7	10	20	53	
Freshmen	16	11	15	7	23	19	30	121	
Specials	23	16	15	6	13	9	14	96	
S. A. T. C.	...	...	...	...	...	...	...	289	
	76	34	49	14	54	51	94		661
Vocational	16	89	23	41	11	11	26	217	
S. A. T. C.								403	
Training Detachment								702	
	92	123	72	55	65	62	120		1322

Summer School, 1918—Males	31	
Females	201	232
Correspondence Department and Extension Classes—Males	153	
Females	286	439
		2654
Less names repeated		131
Total		2523
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Girls	59	112
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Girls	7	14
Total		126

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The opening dates for the 1919-20 year are as follows:

Fall Quarter opens September 15.
Winter Quarter opens December 8.
Spring Quarter opens March 8.
Summer Quarter opens June 7.

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